

incline to the belief that some of these differences may be coextensive with the families *Hystriidae* and *Leporidae* respectively; but even should they prove to be only distinctive marks of subordinate groups, these observations will not be destitute of some slight zoological and classificatory value, in addition to whatsoever they may express of anatomical interest.

November 22, 1866.

Dr. J. E. Gray, F.R.S., V.P., in the Chair.

The Secretary read a letter from Mr. A. Grote of Calcutta, F.Z.S., stating that the Porcupine transmitted to the Society on April 18th, 1866, and subsequently described by Dr. Gray (P. Z. S. 1866, p. 306, Pl. XXXI.) as *Acanthochoerus grotei*, had been received from Malacca. It had been procured for him by Capt. Maddison, Commander of one of the Straits Mail Steamers, from the jungles behind Malacca. Mr. Grote promised to endeavour to obtain other examples of this animal for the Society.

Mr. Selater exhibited a young specimen of *Chauna derbiana** in spirits, which had been forwarded to him by Dr. W. Huggins of San Fernando, Trinidad, C.M.Z.S., with the following note:—

“This is a species of Wader, apparently a young bird; the people here call it ‘Wild Turkey.’ These birds are very rare here, being found now and then in a large lagoon. I saw one some forty years ago, a large one, and have never met with one since until now, though I have shot in a great many places over the island. Three young birds of this species were brought to a friend of mine some little time ago, one of which I now send you.”

Mr. Selater remarked that the only species of the group of *Palamedeidae* given as occurring in Trinidad in M. Léotaud’s recently published work on the ornithology of that island† was *Palamedea cornuta* (p. 488), and that he strongly suspected that the so-called *Palamedea cornuta* of Trinidad would turn out to be the present species, which was now ascertained to extend its range from the littoral of New Granada and Venezuela into that island.

The following extract from a letter addressed to the Secretary by Dr. G. Bennett, F.Z.S., and dated Sydney, July 20th, 1866, was read:—

“Respecting the Whistling Ducks in the Botanic Gardens here, I observe in the ‘Proceedings’ for March last, just received (p. 149),

* See P. Z. S. 1866, p. 369.

† Oiseaux de l’île de Trinidad, par A. Léotaud. Port d’Espagne, 1866.

you quote my letter ; but the fact is still more extraordinary, since I find, now that the birds are in full plumage, that instead of *Dendrocygna vagans*, they are of a species never, I believe, before seen so far south (and these were captured near Port Macquarie), viz. the *D. (Leptotarsis) eytoni*. They are now in fine plumage in our Aviary in the Gardens, and I hope Broughton will be able to take them to you next time he leaves for England."

The Secretary called the attention of the Meeting to several additions to the Society's Menagerie which had been made during the past summer, amongst which were particularly noticed as being of special interest the following :—

1. Two Cocks of the Rock (*Rupicola crocea*) from Demerara, presented July 4th by J. Lucie Smith, Esq., R.W. I. M. S. S. 'Tamar.'

2. Two males of the Pallas's Eared Pheasant, *Crossoptilon auritum*, presented July 13th by Dudley E. Saurin, Esq., recently attached to the British Embassy at Pekin. Mr. Saurin had unfortunately lost the females of this remarkable species of Pheasant during the journey home ; but the Society had more recently acquired two examples believed to be of the latter sex from the Jardin d'Acclimatation of Paris.

3. Six Australian Wild Ducks (*Anas superciliosa*, Gm.), two specimens of an Australian *Artamus* (*A. superciliosus*), and a Straw-necked Ibis (*Geronticus spinicollis*), presented by the Acclimatation Society of Melbourne, July 20th, 1866.

4. Three Ruddy Flamingos (*Phænicopterus ruber*) from North America, purchased August 3rd, 1866 ; not previously exhibited in the Society's Menagerie.

5. A White-necked Stork (*Ciconia leucocephala*, Gm.), presented by Mrs. D. Campbell, August 10th, from Western Africa ; believed not to have been previously exhibited in the Society's Gardens.

6. A pair of the Markhore Goat (*Capra megaceros*), presented to the Menagerie by Major F. R. Pollock, and received August 24th last. The male had been obtained for Major Pollock by Lieut. Cavagnari from the hills north of Dera Ismail Khan, in February 1863, when about four or five days old. The female had been obtained in the same locality in May 1864, when it was apparently about a month old.

7. A Blue-cheeked Barbet (*Megalæma asiatica*) and four specimens of the Himalayan *Leiothrix lutea* imported from Calcutta, both species being new to the Society's collection.

8. A fine adult male example of the Jew-Monkey (*Pithecia satanas*), purchased October 15th.

9. A Formosan Bear, purchased for the Society by Mr. R. Swinhoe, F.Z.S., as typical of his species *Ursus formosanus* (Swinhoe, P. Z. S. 1864, p. 380, and Gray, *ibid.* p. 689), and received October 25th. As far as could be told by external appearance of the living animal, this specimen appeared quite identical with the Himalayan Bear (*Ursus tibetanus*, F. Cuv.), of which two examples were in the Society's Menagerie.

10. Three Formosan Pigs (*Sus taivanus*, Swinhoe, P. Z. S. 1864, p. 383), received along with the preceding. Two of these specimens were of uniform brown coloration, as described by Mr. Swinhoe, *l. c.* The third bore a conspicuous white patch, and gave one the idea of a domesticated animal.

A communication was read from Dr. H. Schlegel, F.M.Z.S., containing the following list of the most remarkable species of Mammals and Birds collected by Messrs. Fr. Pollen and D. C. van Dam in Madagascar, and about to be described in a work entitled 'Recherches sur la Faune de Madagascar et de ses dépendances, par MM. H. Schlegel et Fr. Pollen':—

MAMMALS.

LEMUR MACACO (male). *Lemur leucomystax*, Bartlett (female). See Schlegel, Contrib. in Ned. Tydschrift voor Dierkunde, iii. p. 74. Only observed on the north-west coast of Madagascar. A series of both sexes, young and adult ones, obtained.

LEMUR MAYOTTENSIS, Schlegel, Contrib. *l. c.* Only observed in the Isle of Mayotte.

LEMUR CATTÀ. Obtained from St. Augustin's Bay. This species is restricted to the southern part of Madagascar.

HAPALEMUR GRISEUS sive OLIVACEUS, Geoffroy. A series obtained at the north-west coast.

LEPILEMUR MUSTELINUS, Geoffroy. Several specimens obtained at the north-west coast.

CHEIROGALEUS FURCIFER, Gervais. A series obtained at the north-west coast.

MICROCEBUS COQUERELI, Pollen (nov. spec.). North-west coast.

VIVERRA SCHLEGELII, Pollen; Schlegel, Contrib. *l. c.* Mayotte and north-west coast of Madagascar.

GALIDICTIS STRIATA, Geoffroy. Eastern coast, collected by Mr. Lantz.

CRYPTOPROCTA FEROX, Bennett. North-west coast of Madagascar. A very old male obtained. This is the true *Fossa* of the inhabitants of this coast, the *Viverræ* being comprised by them under the name of 'Sabady.' This form is a modification of the genus *Felis*. Body and skull more elongated; feet shorter; claws half retractile; grinders in the upper jaw exactly as in the Cats; in the under jaw one grinder more (sc. 4), a circumstance sometimes occurring also in Cats (one of our skulls of *Felis tigrina* presenting at the left side of the under jaw a fourth, although very small, posterior grinder).

PTEROPUS EDWARDSII. Madagascar and Mayotte.

PTEROPUS DUPRÉANUS, n. sp., Pollen. Allied to *P. stramineus*

from Sennaar and Senegambia; but tail longer (7 lines), and the general colour of fur greyish yellow.

SOREX. Two species. Mayotte and Madagascar.

CENTETES ECAUDATUS. Madagascar; introduced into Mayotte, Réunion, and Mauritius.

ERICULUS SPINOSUS. Tintingue, collected by Mr. Lantz.

MUS ALEXANDRINUS. North-west coast.

BIRDS.

FALCO COMMUNIS. *Falco radama*, Verreaux, is nothing but the common dark variety of this species.

FALCO NEWTONI, Gurney.

NISUS FRANCESII. Old males often with indistinct rust-coloured bands on the underside. *Nisus madagascariensis* is founded upon the females and young of this species.

NISUS LANTZII, Verreaux. Represents *Nisus fringillarius*, to which it is closely allied in its form, long and slender toes, and small head; colours darker; tail with more numerous (ten) dark bands. An adult female collected.

NISUS MORELII. *Nisuoïdes morelii*, Pollen, Bullet. d. Sciences de l'île de la Réunion, année 1866. A rather small species, and well defined by the quite straight margins of its upper mandible.

NISUS BRUTUS, Pollen, in Schlegel, Contrib. *l. c.* From Mayotte; nowhere else observed.

CIRCUS MAILLARDII. From la Réunion. Dr. Hartlaub's description of *Circus melanoleucus* is taken from a specimen of *Circus maillardii*. *Circus melanoleucus* has not yet been observed in Madagascar and its dependencies, and must be rejected as belonging to the fauna of this region.

HALIAËTUS VOCIFEROIDES. Distinct from *H. vocifer*; but not in the character taken from the colour of the tail.

BUTEO BRACHYPTERUS. A considerable series collected, even young ones in down-plumage. We must reject as a Madagascar species the *Buteo tachardus* of Hartlaub, his specimens being identical with *B. brachypterus*.

BAZA MADAGASCARIENSIS. *Pernis madagascariensis*, Smith? A very interesting species, coloured like a *Buteo*; very different from *Avicida cuculoides*, which, on the contrary, is identical with *A. verreauxii* or *A. cafer*.

MILVUS ÆGYPTIUS s. PARASITICUS. Common in Mayotte and at the north-western coast of Madagascar.

GYMNOGENYS RADIATUS. The Madagascar specimens are not specifically distinct from those of Africa. See Schlegel, Muséum, Astures, p. 54.

NOCTUA POLLENI, Schlegel, Contrib. *l. c.* Madagascar. Allied to *Noctua sonneratii*, but with spotted primary quills and a dark band crossing the under part of throat.

STRIX FLAMMEA. Four specimens collected. A little larger than the European specimens. Colouring pale.

SCOPS MENADENSIS, of which *Scops rutilus*, Pucheran, is a red variety.

CAPRIMULGUS LONGIPENNIS, Shaw. Only noted to remark that *Semeiophorus vexillarius* of Gould is based upon specimens freshly moulted, when part of the long quills has not yet been used.

CYPSELUS PARVUS. The only species of Swift observed in Madagascar and Mayotte. Not found in Réunion and Mauritius. We do not know *Cyps. unicolor*, Hartlaub, which at all events differs from *Cyps. unicolor*, Jardine, observed at Madeira and on the Gold Coast.

CHÆTURA GRANDIDIERI, Verreaux.

COLLOCALIA FRANCICA. Réunion.

HIRUNDO BORBONICA.

EURYSTOMUS MADAGASCARIENSIS. See Pollen, Album de la Réunion, 1866.

DACELO MADAGASCARIENSIS. *Ispidina madagascariensis*, Kaup. Western coast of Madagascar. Exactly described by Brisson and Hartlaub. It appears that *Halcyon gularis* does not inhabit Madagascar. See *Dacelo fusca*, Schlegel, Muséum, Alcedines, p. 28.

ALCEDO VINTSIODES. Common in Mayotte and Madagascar.

MEROPS SUPERCILIOSUS. Common in Madagascar and Mayotte. Hardly to be distinguished from *M. ægyptius*, *M. savignyi*, and *M. vaillantii*. Young specimens from Mayotte are like those of Northern Africa. *Merops viridissimus* was never heard of in Madagascar.

UPUPA MARGINATA. Not very rare on the north-west coast of Madagascar.

FALCULIA PALLIATA. A fine series, including very young ones, collected on this coast.

NECTARINIA ANGLADIANA and **N. SOUIMANGA**. Madagascar and Nossi-bé. The latter more common than the former.

NECTARINIA COQUERELI, J. Verreaux. Comes from Mayotte, not from Madagascar.

DRYMOICA ELLISII. *Ellisia typica*, Hartlaub. In ferns, Madagascar.

CISTICOLA MADAGASCARIENSIS. *Drymoica madagascariensis*, Hartlaub.

CALAMODYTA NEWTONI. Madagascar.

BERNIERIA MAJOR and **B. MINOR**. In ferns, on the north-west coast of Madagascar.

EROESSA TENELLA, Hartlaub = *Damia pusilla*, Pollen, in *litteris*. Form of bill somewhat like *Zosterops*; but wings rounded, the fourth quill being the longest. Small; wing 20 lines. Upper part yellowish green, but the neck greyish; throat and breast yellow. North-west and north-east coasts of Madagascar.

COPSYCHUS PICA. Madagascar. Females very rare.

SAXICOLA RUBICOLA. As mentioned many years ago, it is quite impossible to find out constant differences between *Motacilla rubicola*, Linné, from Europe, *M. sybilla*, Linné, from Madagascar, *Saxicola pastor* from South Africa, *S. hemprichii* from North Africa, *Motacilla maura*, Pallas, from Siberia, and *Pratincola indica*, Blyth, from India. All the Madagascar specimens belong to one species. The colouring (white and dark) of the rump is individual. Those from Bourbon differ more conspicuously than those from any other country, their throat remaining of a pure white when the rest of the head has already taken the black colour. We hope to be able, in our work, to decide the question whether the Bourbon specimens should stand as a proper conspecies under the epithet of *borbonica*, already given to this bird by Bory de St. Vincent.

NEWTONIA BRUNNEICAUDA, Pollen. *Erythrosterna* (?) *brunneicauda*, Newton. North-west and north-east coasts of Madagascar.

GERVAISIA ALBISPECULARIS. North-eastern coast of Madagascar, collected by Lantz and Grandidier. The genus *Gervaisia* will hardly stand.

ZOSTEROPS MADAGASCARIENSIS. North-west coast of Madagascar.

ZOSTEROPS BORBONICA. *Certhia borbonica*, Gmelin. Réunion. Not observed in Madagascar.

ZOSTEROPS HÆSITATA, Hartlaub. Not different from *Certhia olivacea*, Linné. Réunion; not found in Madagascar.

ZOSTEROPS CHLORONOTUS. Appears to be found only in Mauritius.

ZOSTEROPS MAYOTTENSIS, Pollen = *Zosterops flavifrons*, Pollen. See Schlegel, Contrib. l. c. Only in Mayotte.

PHILEPITTA SCHLEGELI, Pollen. The adults with the whole eye surrounded by large fleshy blue and green lobes; under parts and fore part of the back yellow; head black; the other upper parts yellowish green. Young without lobes.

PHILEPITTA JALA. Observed by Messrs. Lantz and Grandidier on the eastern coast of Madagascar. The males proved to be the *Philepitta sericea*, Geoffroy, *Merula madagascariensis aurea*, Brisson, *Phyllornis jala*, auct. ex Boddaert, *Turdus nigerrimus*, Gmelin, *Brissonia nigerrima*, Hartlaub; the females and young birds *Philepitta geoffroyi*, Desm. et Fl. Prevost.

HYPsipETES MADAGASCARIENSIS. *Merula madagascariensis cinerea*, Brisson; *Turdus ourovang*, Gmelin; *Hypsipetes ourovang*, Hartlaub. Madagascar and Mayotte. Feet and eyes brown.

HYPISIPETES BORBONICA. *Merula borbonica*, Brisson. Réunion. Feet orange; eyes white.

TSCHITRÆA BORBONICA. Only from Bourbon and from Mauritius; not in Madagascar and Mayotte. Underparts grey; upper parts red brown; head black. Never attains long tail-feathers, and never becomes white and black.

TSCHITRÆA MUTATA. Madagascar and Mayotte.

CEBLEPYRIS CANA. North-eastern and north-western coasts of Madagascar.

OXYNOTUS FERRUGINEUS, from Mauritius, and **OXYNOTUS NEWTONI**, from Réunion. See Pollen, Ibis, 1866, p. 275.

ARTAMIA LEUCOCEPHALA. North-western coast of Madagascar.

ARTAMIA (LEPTOPTERUS) VIRIDIS. North-western and eastern coasts.

ARTAMIA BICOLOR. *Cyanolanius bicolor*, Bonaparte. North-western coast.

DICRURUS FORFICATUS. North-western and eastern coasts.

DICRURUS WALDENI, Schlegel, Contr. in Tydschrift, l. c. Mayotte. An Indian form. Dr. Kirk (see Dr. Slater, Ibis, 1864, p. 299) mentions *D. forficatus* as inhabiting Anjouan. We should not wonder if the Anjouan bird, when closely examined, turns out to be *D. waldeni*.

CALICALICUS MADAGASCARIENSIS. North-western and north-eastern coasts.

VANGA CURVIROSTRIS. North-western and north-eastern coasts.

VANGA DAMII. *Xenopirostris damii*, Pollen; Schleg. Contrib. Tydschrift, l. c. North-eastern coast.

CORVUS SCAPULATUS. *Corvus madagascariensis*, Bonaparte. Madagascar and Mayotte.

PASTOR TRISTIS. Introduced in Réunion and Mauritius, also on the eastern coast of Madagascar (E. Newton).

HARTLAUBIA MADAGASCARIENSIS, Bonaparte. North-western coast.

PLOCEUS PENSILIS. North-western coast. Note that *Ploceus sakalava*, Hartlaub, certainly does not come from Madagascar, and that the name of Soui-di-Seye given to this bird should be Foudicé, which is the Sakkalava name of *Ploceus pensilis*.

PLOCEUS ALGONDÆ, Pollen. A beautiful new species from Mayotte. Larger than *P. madagascariensis*, and bill longer; head, breast, and upper tail-coverts orange; rest of the underparts olivaceous grey washed with yellow; back olivaceous.

PLOCEUS MADAGASCARIENSIS. *Loxia madagascariensis*, Linné. In Madagascar in the wild state. Introduced into Bourbon and Mauritius.

PLOCEUS ERYTHROCEPHALUS. Mauritius; not seen in Réunion and Madagascar.

PLOCEUS FLAVICANS. *Foudia flavicans*, Newton. Only from Rodriguez (Newton). Note that *Foudia eminentissima*, Bonap., a large species from Zanzibar, has never been observed in Madagascar and its dependencies.

SPERMESTES NANA. Madagascar and Mayotte.

ESTRELLA ASTRILD. Not in Madagascar. Introduced from Africa into Réunion and Mauritius.

MUNIA PUNCTULARIA, **M. AMANDAVA**, and **M. ORYZIVORA.** Not in Madagascar. Introduced from India into Mauritius and Réunion.

SERINUS ICTERUS (*Crithagra chrysopyga*) and **CHLORIS CANICOLLIS.** Réunion and Mauritius. Not observed in Madagascar.

PASSER DOMESTICUS. Introduced from France into Réunion.

ALAUDA HOVA. *Mirafra hova*, Hartlaub. Madagascar and Nossi-bé.

PSITTACUS OBSCURUS. North-western and north-eastern coasts.

PSITTACUS NIGER. In the same localities as the former, and more common.

PSITTACULA CANA. Common in Madagascar. Introduced in Mauritius and Bourbon.

CENTROPUS MADAGASCARIENSIS. *C. tolu*, Gmelin, *C. superciliosus*, Hartlaub (juv.), nec Rüppell, and *C. lafresnayi*, Verreaux. Like many other species (see Schlegel, Muséum, Cuculi, p. 67), very variable in size and colouring. Common in Madagascar.

COUA CÆRULEA and **C. CRISTATA.** Common on the north-western and north-eastern coasts.

COUA REYNAUDII. Very rare.

CUCULUS ROCHII, Hartlaub. *Cuculus canorus*, Desjardins (Hartlaub), nec Linné. North-western coast.

LEPTOSOMUS AFER. Common in Madagascar; very common in Mayotte.

PTILOPUS MADAGASCARIENSIS. Observed only in Madagascar.

PTILOPUS SGANZINI. Observed only in Mayotte.

TRERON AUSTRALIS. Common in Madagascar.

COLUMBA POLLENI, Schlegel, Contrib. in Tydschrift, *l. c.* Only observed in Mayotte.

TURTUR PICTURATUS. Madagascar; Mauritius; Réunion; Mayotte.

GEOPELIA STRIATA. More common in Réunion than in Madagascar.

ÆNA CAPENSIS. Madagascar.

PERISTERA TYMPANISTRIA. Only observed in Mayotte.

NUMIDA TIARATA. Madagascar and Nossi-bé. Introduced in Mayotte.

PERDIX STRIATA. Madagascar; introduced in Réunion. Note that *P. spadicea*, *P. madagascariensis*, and *P. ponticerianus* are not found in the wild state in Madagascar or its dependencies.

TURNIX NIGRICOLLIS. Very common in Madagascar.

CHARADRIUS GEOFFROYI. North-western coast.

CHARADRIUS NIVIFRONS. *Char. tenellus*, Hartlaub. North-western coast.

STREPSILAS INTERPRES. Mayotte, Madagascar, and Réunion.

TRINGA SUBARQUATA. North-western coast.

ACTITIS HYPOLEUCOS. Mayotte, Madagascar, Réunion, and Mauritius.

NUMENIUS PHÆOPUS. North-western coast of Madagascar; Mayotte; Réunion; Mauritius.

RHYNCHÆA CAPENSIS. North-west coast.

ARDEA ATRICOLLIS. Mayotte.

ARDEA GARZETTA. *A. xanthopoda*, Pelzeln; *A. elegans*, Verreaux. Madagascar.

ARDEA IBIS. *A. ruficrista*, Verreaux; *A. bubulcus*, Savigny. Mayotte and Madagascar.

ARDEA SCHISTACEA. Madagascar.

ARDEA GULARIS. Bluish-black and white specimens. Madagascar and Mayotte.

ARDEA LEUCOPTERA. See Schlegel, Muséum, *Ardeæ*, p. 35. *Ardea idæ*, Hartlaub. Madagascar.

ARDEA ATRICAPILLA. Mayotte; Madagascar; Bourbon; Mauritius.

ARDEA MINUTA AUSTRALIS, Schlegel, Muséum, *Ardeæ*, p. 39. *Ardeola podiceps*, Bonaparte. Madagascar.

ANASTOMUS LAMMELIGERUS. North-western coast of Madagascar.

PLATALEA TELFAIRI. North-western coast of Madagascar.

IBIS CRISTATA. North-western coast.

IBIS RELIGIOSA. North-western coast.

PARRA ALBINUCHA and *P. AFRICANA*. North-western coast.

RALLUS GULARIS or *R. BERNIERI*. North-western coast.

RALLINA KIOLOIDES. North-western coast, rare, in forests.

GALLINULA CHLOROPUS. *G. pyrrhorhoa*, Alf. Newton, P. Z. S. 1861, p. 19. Madagascar, Réunion, and Mauritius.

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ANAS MELANOTA. *Sarcidiornis africana*, Eyton. Madagascar.
 ANAS ERYTHORHYNCHA. Eastern coast of Madagascar (Lantz).
 ANAS ASSIMILIS, Forster. *Querquedula bernieri*, Verreaux. North-western coast.

DENDROCYGNA VIDUATA. Madagascar; Réunion; Mayotte.

NETTAPUS AURITUS. Madagascar.

DROMAS ARDEOLA. North-western coast.

STERNA GALERICULATA, Lichtenstein. *Sterna velox*, Hartlaub, nec Rüppell. North-western coast.

STERNA AFFINIS, Rüppell. North-western coast of Madagascar.

STERNA DOUGLASII. Réunion, Mauritius, and Nazareth-bank (north of Mauritius and Rodriguez).

STERNA PANAYENSIS. North-western coast.

STERNA STOLIDA. *Anous rousseaui*, Hartlaub. Réunion.

PHAËTON CANDIDUS. *P. flavirostris*, Brandt. Réunion.

GRACULUS AFRICANUS. North-western coast.

PLOTUS MELANOGASTER, Gmelin. See Schlegel, Muséum, *Pelecani*, p. 26. North-western coast of Madagascar. It is a curious fact that the Indian, and not the African, species occurs in this island.

Mr. W. H. Flower, F.R.S., F.R.C.S., F.Z.S., read a memoir on the skeleton of *Inia geoffrensis* and on the skull of *Pontoporia blainvillii*, to which were added remarks on the systematic position of these animals in the Order of Cetaceans.

This paper will be published entire in the Society's 'Transactions.'

The following papers were read:—

1. On some Mammalia collected by Capt. A. C. Beavan, C.M.Z.S., at Moulmein, Burmah. By Dr. W. PETERS, F.M.Z.S.

(Plate XXXV.)

1. PHYLLORHINA DIADEMA, Geoffroy.

"No. 1. *Rhinolophus*, July 29, Moulmein."

A single male, agreeing in every respect with Geoffroy's original description and figure of this fine species.

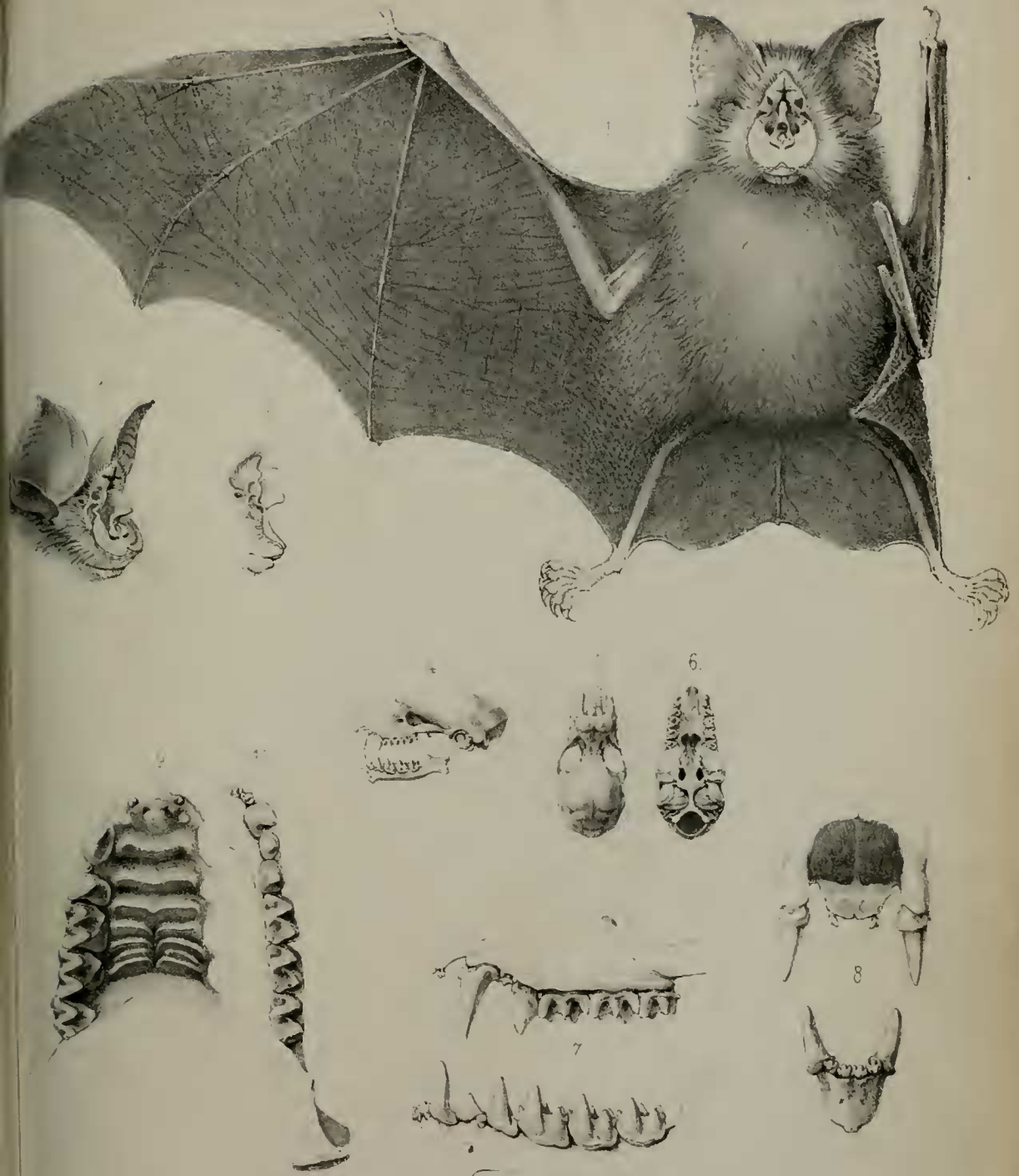
2. RHINOLOPHUS CÆLOPHYLLUS, n. sp. (Pl. XXXV.)

R. supra brunneus, subtus pallidior; auriculis latis acuminatis; prosthernate postico transverso lanceolato, cavitatem pilosam continente; verruca infralubiali quadripartita; alis talum haud attingentibus.

Long. tota 0.064 m., caud. 0.019 m., antibr. 0.042 m., tib. 0.019 m.

"No. 2. *Vespertilio*, August, Salween valley."

This very remarkable small species approaches in size the *R. ma-*



Wagner lith.

M & N Hanhart imp

RHINOLOPHUS COELOPHYLLUS.



crotis and *subbadius*, Hodg., from Nepal, but is very easily to be distinguished from all other species by the peculiar form of the saddle and the lancet. It agrees in every other respect with the true *Rhinolophi*; but if any one wishes to make a genus of it, he may call it *Cælophyllus*, with the same name for the species.

Ears large, pointed, a little shorter than the head, with seven or eight transverse folds, and the notch above the antitragus acutely triangular; horseshoe large, in front triangularly notched, sides covering a single rudimentary secondary leaf; front part of saddle bent forwards rectangularly, dilated at the base into a disk covering the nostrils, rounded but not dilated at the point; the upper margin of the saddle is lengthened, without a pointed process, and not united with the lancet, but entering with its hinder part into the cavity of the lancet. The latter is very peculiarly formed,—convex from behind, and containing a long hairy cavity open in front, where on each side are to be seen the usual two lower cells, as in *R. ferrum-equinum*; but the septum between these two cells is cleft to make room for the hinder part of the saddle; and instead of the upper third pair of cells there is a transverse slit, joined by a longitudinal fissure descending from the apex of the lancet. The front part of the lower lip has the usual naked swollen prominence, divided by three longitudinal furrows into four divisions. The wings are large, the fifth finger being a little longer than the fourth, and do not reach the ankle, but leave the lowest part of the tibia free, as in *R. ferrum-equinum*.

Teeth $\frac{3-2}{3-3} \frac{1}{1} \frac{1-1}{4} \frac{1}{1} \frac{2-3}{3-3}$; the first small upper premolar is short, pointed, and placed in the row of the other teeth; the second rudimentary lower premolar lies on the outside, in the angle formed by the first and second premolars.

The upper parts are brown, the underside paler, the hair being whitish with brown tips; and the wings are black brown.

	metre.
Total length	0.064
Length of the head	0.020
—— of the ear	0.0175
Breadth of the ear	0.0125
Length of the whole nose-leaf	0.013
Breadth of the horseshoe	0.0087
Length of tail	0.019
—— of humerus	0.0235
—— of forearm	0.042
1st finger. Metacarp. 0.004 .. 1st ph. 0.0028.. 2nd ph. 0.0017	0.0085
2nd finger. „ 0.0335.. „ 0.001	0.0345
3rd finger. „ 0.031 .. „ 0.013 .. „ 0.0205.. Last 0.0027	0.065
4th finger. „ 0.0322.. „ 0.0085.. „ 0.012 .. „ 0.0010	0.053
5th finger. „ 0.0315.. „ 0.010 .. „ 0.0116.. „ 0.0013	0.054
Length of femur	0.01651
—— of tibia	0.019
—— of foot	0.0105
—— of spur	0.010*

* In the same bottle with the Bats were two specimens of a fish (labelled “*Anabas scandens*, common on trees in water and mud-banks of Salween tidal waters”) referable to *Periophthalmus koelreuteri*, Tschudi.

3. *SCIURUS ATRODORSALIS*, Gray, Ann. Nat. Hist. x. p. 213, 1842.

Sciurus atrodorsalis et *S. hyperythrus*, Blyth, Journ. As. Soc. 1855, xxiv. pp. 474 & 477; 1862, xxxi. p. 333.

"Nos. 3, 4, 5, 9, 10, 11, 12, 13, Salween valley, August."

"No. 7, Moulmein, July 28th; No. 8, Moulmein, July 29th."

Capt. Beavan has added the following notes:—

"Blyth, in 'J. A. S.' for 1862, p. 333, thus describes the difference between *S. atrodorsalis* and *S. hyperythrus*.

"'*S. hyperythrus*, nobis' (said to be from Moulmein, but more probably from the hills bordering the Sitang valley), is very like *S. atrodorsalis*; but has black whiskers, the back, sides, and exterior of limbs quite uniformly coloured, and no trace of the black patch upon the back.' And in a note, with reference to specimens in the museum of the Asiatic Society:—'We have specimens of *S. atrodorsalis* without the black dorsal patch; but the whiskers are white, and the general colouring, especially that of the tail, readily distinguish them from *S. hyperythrus*.' In the collection now sent will probably be found specimens of both species, if indeed they are distinct, which I am inclined to doubt. In some the whiskers are mixed black and white. They are all, pending a further comparison, labelled *S. atrodorsalis*. Nos. 3, 4, 5, 9, 10, 11, 12, and 13 were killed on my recent trip up the Salween, where they were abundant in high trees about the villages on the proper *left* (Amherst) bank of the river. Nos. 7 and 8 were killed in Colonel Brown's garden in Moulmein, and are thus noted:—

"Description of a specimen in the flesh, killed at Moulmein, July 28th, 1865:—

"No. 7. *S. atrodorsalis*, Gray. Full-grown male. Total length 18 inches; tail $10\frac{1}{4}$. Irides dark brown; ears round, small; teeth yellowish orange, rather dull-coloured; face, ears, and the tip of nose reddish; black patch on back slight; belly, inside of forearm, and hind legs rufous maroon; tail grizzly rufous, lighter at tip; inside of paws brown; claws brown, with white tips; whiskers, the hinder pair large, strong, and pure white, with black hairs nearer the nose; testes well developed.

"Forearm (elbow to wrist) $1\frac{3}{4}$; wrist to tip of nails $1\frac{1}{2}$ nearly; hind leg, tibia $2\frac{3}{8}$; foot 2, to end of elbow.

"No. 8. July 29th. Specimen in flesh; a male, older than the preceding, of a deeper rufous maroon underneath; nose, ears, and face more rufous; tail more bushy; paws, both hind and fore, grizzled black; the back pure black for 5 inches; tail more rufous. Length 18 inches; tail 10 inches, the tip of which is rufous white. No black hairs at all amongst the white whiskers."

The interesting series collected in such a judicious manner by Capt. Beavan proves clearly that he is quite right in uniting *S. hyperythrus*, Blyth, with *S. atrodorsalis*.

According to Mr. Blyth no. 8, with white whiskers, would be a typical specimen of *S. atrodorsalis*; no. 3, 11, and 13, with black whiskers, a specimen of *S. hyperythrus*. But not only the specimen

no. 7, described by Mr. Beavan, with black and white whiskers, but also no. 4, with the whiskers partly yellow-pointed, nos. 5, 10, and no. 12, with yellow-ringed whiskers, represent combining forms. The same is to be seen in the different colouring of the tail of the different specimens, which varies from olive-yellow to orange and red-orange.

4. *SCIURUS PHAYREI*, Blyth, Journ. As. Soc. 1855, xxiv. p. 476.

"No. 6. *Sciurus*, August, Martaban, bank of the Salween, near the junction of Yunzalin River."

The specimen, a male, belongs without doubt to this beautiful and well-described species*.

5. *SCIURUS CHRYSONOTUS*, Blyth, Journ. As. Soc. x. p. 920; 1847, xvi. p. 873; 1855, xxiv. p. 474.

"No. 21, male, no. 23, female, July; no. 22, male, September, Moulmein.

"No. 21. Specimen in flesh, *S. chrysonotus*, Blyth; male. Length: tip of nose to insertion of tail 9 inches; insertion of tail to end of tail 11 inches (total 1 foot 8 inches). For $4\frac{1}{2}$ inches the tail is thick and bushy, the remaining $6\frac{1}{2}$ being composed of longer, thinner, and altogether fewer hairs, with a conspicuous black tip. General colour fulvous grizzled; no black mark on back; greyer on thighs, legs, and belly. Tip of nose and paws glistening white; whiskers black; ears small and rounded; teeth dirty orange-yellow; irides dark brown. The female a little smaller, with tail bushy the whole length, and black-tipped of course. The peculiarity in the tail of the male is probably exceptional.

"No. 22. This specimen shows a slight patch or two of golden fulvous on back of neck.

"This species is very domestic, frequents a small grove of *Mesua ferrea*, Linn., near the house, on the ripe nuts of which it feeds in July; occasionally descends to the ground to pick up some fragments thrown from the house, but never stays there long. Found a nest of this species early in July, with one young one in it, in a *Cathartocarpus*, the *Cassia florida* of Vahl."

The specimens sent with the foregoing interesting information leave no doubt about their determination.

Capt. Beavan also noticed a species of *Tupaia* about clumps of bamboos in gardens of Moulmein, but has not yet been able to secure a specimen.

* The Zoological Museum at Berlin received a long time ago a red-bellied Squirrel from Tenasserim, together with the *Semnopithecus chrysogaster*, Licht. (*S. potenzi*ani, Bonap.), which appears to be different from all hitherto described species. It may be called

SCIURUS PICEUS, n. sp.

S. piceus; gula, pectore, ventre artuumque latere interno rufis.

Long. ab ap. rostri ad caudæ bas. 0.70 m., cap. 0.060 m., aur. 0.018 m., caud. 0.90 m., palm. 0.035 m., plant. 0.062 m.

This species belongs to the group of *S. hippurus*, *atrodorsalis*, *erythrogaster*, &c.

2. On *Taphozous flaviventris*, Gould, a new Species of Bat from Australia. By Dr. W. PETERS, F.M.Z.S.

T. nigro-fuscus, subtus pallide ochraceus; calcari tibia longiore.

Above black brown; beneath pale ochraceous yellow; hair unicolor, the hairs on the belly whitish at the base; wings blackish, at the posterior margin whitish. Male with a large fossa between the hinder parts of the branches of the lower jaw; ears rounded, externally slightly emarginate; tragus as long as high, securiform; wings on the dorsal side naked, on the under side, above and below the arm-bones, woolly; femora on the dorsal side naked, on the ventral side covered with a thin woolly fur, which descends on the base of the interfemoral membrane. Also the point of the tail shows some hair.

	metre.
Total length, about.....	0·130
Length of head	0·035
—— of ear	0·018
Breadth of ear.....	0·011
Tail... ..	0·025
Forearm	0·075
First finger	0·014
Second finger	0·074
Third finger	0·144
Fourth finger	0·087
Fifth finger.....	0·072
Tibia	0·028
Foot (with claws)	0·016
Spur	0·033

This species, represented by a single male submitted to my examination by Mr. Gould, is, although nearly related to *T. australis*, Gould, different in colour and in its superior size.

3. Note on a Collection of Bats from Trinidad.

By Dr. W. PETERS, F.M.Z.S.

The collection of Bats formed by Dr. W. Huggins, C.M.Z.S., at San Fernando, Trinidad, which Mr. Sclater has kindly put into my hands for determination, contains the following species (they are all also known from the Brazils and Surinam):—

1. PHYLLOSTOMA HASTATUM, Geoffroy.
2. HEMIDERMA BREVICAUDUM, Wied, sp.
3. DERMANURA QUADRIVITTATA, Peters.
4. CHIRODERMA VILLOSUM, Peters.
5. STURNIRA LILIUM, Geoffr., sp.





CHÆTOCERCUS CRISTICAUDA

6. NOCTILIO LEPORINUS, Linné.
7. FURIA HORRENS, F. Cuv.
8. MOLOSSUS OBSCURUS, Geoffr.
9. VESPERTILIO PARVULUS, Temminck.

4. On the Classification of the small *Dasyuridæ* of Australia, with Descriptions of Two New Genera and One New Species. By GERARD KREFFT, Curator and Secretary of the Australian Museum, Sydney, New South Wales, Corr. Memb.

(Plate XXXVI.)

Few groups of animals have been so little understood as the small Marsupial Insectivores of Australia; the difficulty in procuring a number of specimens of these nocturnal creatures, and the carelessness of some authors, who will not take the trouble to examine a species properly before assigning it a position in the genus to which it appears to belong, have caused a confusion which I will try to correct.

The Marsupial Insectivora have hitherto been divided into three genera:—*Phascogale* (Temminck), *Antechinus* (MacLeay), and *Podabrus* (Gould). Of these, only two, namely *Phascogale* and *Antechinus*, have been defined by their respective founders; while of *Podabrus* I cannot ascertain the true characters beyond what Mr. Waterhouse tells us, that it comprises the *Phascogalæ* with slender feet. Whether this is sufficient for the establishment of a new genus without giving some information regarding the teeth of the animal, I do not know; but for the present it will perhaps be better to retain the genus. I now propose to divide these small Insectivores as follows:—

PHASCOGALE, Temminck.

Dasyuridæ with the two foremost incisors of the upper and lower jaw larger than the others, with short broad feet, more or less naked tarsi, rather long and soft fur, and with five toes to each foot, the inner toe of the hind foot being a nailless prehensile thumb.

Habits arboreal. Pouch absent. Mammæ ten. Apical portion of tail clothed with long bushy hair. Dentition:—I. $\frac{4-4}{3-3}$; C. $\frac{1-1}{1-1}$; P. $\frac{3-3}{3-3}$; M. $\frac{4-4}{4-4}$ = 46.

1. PHASCOGALE PENICILLATA (Gould, Mamm. Austr. i. pl. 31).

Hab. The coast districts from Swan River to New South Wales.

2. PHASCOGALE CALURA (ibid. pl. 32).

Hab. The interior of Australia, from the Williams River to the Lower Murray, including Victoria, South Australia, and New South Wales.

ANTECHINUS, MacLeay.

Dentition as in *Phascogale*. Fur rather harsh and short. Tail clothed throughout with short hair. The feet broad and robust. Tarsi more or less naked. First pair of incisors equal to, or but slightly larger than the other front teeth; canines more developed than any of the premolars; and the articulating condyle of the lower jaw more elevated than in the genus *Phascogale*. Provided with a pouch, which is sometimes very shallow; with ten mammæ; and arboreal in their habits.

1. ANTECHINUS FLAVIPES (Gould, Mamm. Austr. i. pl. 40).

2. A. LEUCOGASTER (ibid. pl. 38).

3. A. UNICOLOR (ibid. pl. 37).

4. A. FERRUGINIFRONS (ibid. pl. 36).

These three species are probably all local varieties of the first, *A. flavipes*. I have removed a number of skulls from specimens answering to Mr. Gould's description of the above species, but could detect no difference in the shape of the skull or the dentition. Besides, *A. flavipes* has a very wide distribution, and is found from Cape Horn to the Tropics on the east coast; it is also a common animal in the interior of South Australia and New South Wales.

5. A. SWAINSONII (ibid. pl. 34).

Hab. Tasmania.

6. A. APICALIS (ibid. pl. 39).

Hab. West Australia.

7. A. AFFINIS.

Hab. Tasmania.

8. A. MACULATUS (ibid. pl. 44).

Hab. Queensland.

9. A. MINUTISSIMUS (ibid. pl. 45).

Hab. Queensland.

Some of these species, as *A. affinis* and *A. maculatus*, I have not seen; but they belong probably to the broad-footed section of this genus.

PODABRUS, Gould.

Antechini with small, slender feet, five toes to each foot, the small nailless thumb situated still further back than in the genus *Antechinus* proper. Fur very soft and dense, of a woolly texture. Canines small, seldom exceeding the largest premolar in size. Pouch with generally ten, sometimes with only eight mammæ. Terrestrial in their habits.

1. *PODABRUS MACROURUS* (Gould, Mamm. Austr. i. pl. 46).*Hab.* The east coast of Australia.2. *P. CRASSICAUDATUS* (ibid. pl. 47).*Hab.* The interior of South Australia, Victoria, and New South Wales; in the last two colonies the Lower Murray district.

Mammæ ten.

3. *P. FULIGINOSUS* (ibid. pl. 41).*Hab.* West Australia.

Mammæ eight.

The last-mentioned species, I am informed by Mr. George Masters (who collected during the last nine months at the head of Spencer's Gulf and King George's Sound), is truly terrestrial in its habits, never climbing, and being generally found in deserted ants' nests. Of the forty or fifty specimens obtained, more than thirty were females, and all have eight mammæ; while *Antechinus albipes*, which is common on the Lower Murray and near Sydney, has ten mammæ in the pouch.

4. *P. ALBIPES* (ibid. pl. 42).5. *P. MURINUS* (ibid. pl. 43).

These two species are no doubt varieties of each other: a few white or black hairs on the tail, or a "wash of brown," as Mr. Gould often has it, are not sufficient to distinguish one animal from another; besides the two plates of these little creatures in the 'Mammals of Australia' are so much alike that I am sure the artist himself could not tell which was *P. murinus* and which *P. albipes*.

6. *P. LEUCOPUS* (ibid. pl. 35).

This, according to Mr. Waterhouse, is also a variety. Its habitat is stated to be Tasmania.

7. *P. MITCHELLI*, sp. nov.

This new species is by far the largest of the small Dasyuridæ with thick woolly furs. A single, much mutilated specimen, with a note attached that it was obtained by the great Australian explorer, I found in a heap of rubbish some years ago. I always thought that it was a new animal; and having now closely investigated the whole family, I no longer hesitate to describe it.

The fur is similar to that of *Phascogale lanigera* of Gould—long, thick, woolly, and beautifully soft hairs slate-grey at the base, light brown on the apical portion, and tipped with black. The ears are long, covered with short brownish hairs. The feet white. The tail is longer than the body; and what remains of the covering shows that the hair was long and probably ended in a tuft. The under part of the body is whitish. Total length 11 inches, the tail being about one-half of it or $5\frac{1}{2}$ inches, the ears $\frac{7}{8}$ inch, tarsi 1 inch. The measurement is not strictly accurate, on account of the dried condition of

the skin; a well-preserved full-grown animal would probably measure more. The skull is perfect, the form of the teeth approaching those of *P. lanigera*; the first two incisors in the upper jaw are slightly pushed forward, though not longer than the others; there is a space about the size of a tooth between the last incisor and the canine, which has been broken at the root, but, as far as I can see, has not been larger than the third premolar. The molars present the usual triangular shape; the second is the largest; the fourth narrow and transverse. There are three incisors, of almost equal size, in the lower jaw; a pair of slender rather curved canines, which are not so broad at the base as those of *Phascogale* proper; three premolars, of which the second is the largest, the first and third being about equal; and four molars, the middle two of equal size and larger than the first and fourth.

Hab. The interior of New South Wales?

ANTECHINOMYS, gen. nov.

The Dasyuridæ which I propose to arrange under the above name will comprise those truly terrestrial animals which are provided with only four toes on the hind foot, without any indication of a thumb, which have the tarsi completely covered with hair, and the underside of the toes and foot alone naked. They move by a succession of jumps, and have a tail longer than their body.

Dentition like *Podabrus*, with the canines still less developed.

At present this genus would comprise a single species only, namely, the animal described by Mr. Gould as *Phascogale lanigera*.

ANTECHINOMYS LANIGERA (Gould, Mamm. Austr. i. pl. 33).

I think that naturalists will agree with me, that an animal so different in its habits, the structure of its limbs, and the form of its teeth from *Phascogale* should have long ago been separated therefrom. I have not the least doubt that the little animal figured in the 'Mammals of Australia' upon the branch of a tree *with only four toes* is identical with another in this Museum, presented by the late Sir Thomas Mitchell; and as I have had many opportunities of observing it alive, I can confidently state that it is a truly terrestrial species.

Hab. The Lower Murray River district, near the junction of the Darling.

CHÆTOCERCUS, gen. nov.

This new genus, which will conclude the small Dasyuridæ of Australia, has been founded upon a very singular animal, approaching in its dentition *Dasyurus* proper much more than any other known genus, and may be defined as follows:—

Dasyuridæ with short, broad, almost triangular head and strongly developed auditory bulla, which equals that of *Phascogale penicillata* in size. Canine teeth in the upper jaw strong and elongate, not so broad at the base as in the genus *Phascogale*. Incisors long and





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CRATEROPUS MELANOPS.

narrow as in *Dasyurus*; the first pair directed forwards, and slightly longer than the others. Premolars three in the upper jaw, the middle one largest, the first somewhat smaller, and the third and last very diminutive and tubercular. Molars of the usual triangular form, with rather blunt tubercles, increasing in size from the first to the third, the fourth being narrow and transverse. The lower jaw is short and strong, and the articulating condyle placed still higher comparatively than in any other species of this group. The incisors are three in number, the first pair being the largest. Canines smaller than those of the upper jaw, but sharp and pointed, without the broad base common to other small Dasyures. Of premolars only two are found in the lower jaw, the second larger than the third. There are four molars, the first and last being the smallest, the two middle ones of about equal size; on the first the anterior tubercle is scarcely indicated, showing, with the absent third premolar, a close approach to the genus *Dasyurus*. Tail thick, compressed, with a crest of black hair upon the apical half, similar to the tail of *Chæropus*.

1. *CHÆTOCERCUS CRISTICAUDA*, sp. nov. (Pl. XXXVI.)

General structure similar to that of *Phascogale calura*; limbs strong, furnished with long claws; five toes to the fore and hind feet, the inner toe of the latter a short nailless thumb; the hair upon the fore feet is very long and shaggy.

General colour a leaden grey at the base of fur, tipped with sandy and rufous. Tail: basal portion reddish, darker towards the tip.

Total length 8 inches, tail $3\frac{1}{4}$, head to base of ear 1, tarsi and toes $1\frac{1}{8}$.

Hab. South Australia, probably the neighbourhood of Lake Alexandrina.

The Australian Museum received a specimen of this animal, which is not in very good condition, from Fr. G. Waterhouse, Esq., of the Institute Museum, Adelaide, a gentleman who has done much to investigate the fauna of South Australia.

5. On a New Species of the Genus *Crateropus*, Sw.

By Dr. G. HARTLAUB, F.M.Z.S.

(Plate XXXVII.)

CRATEROPUS MELANOPS, sp. nov.

Dorso et alis obsolete fuscis, cauda intensius fusca, sub certa luce quasi fasciolata; interscapulio colloque postico nonnihil pallescentibus; pileo conspicue cinerascente, plumularum apicibus albicantibus; mento summo nigro; gutture, capitis lateribus striolaque supraciliari cærulescenti-canis; macula inter rostrum et oculum subquadrata holosericeo-nigra; pectoris plumis pallide brunneis, pallidius marginatis; abdomine subflavescente,

immaculato; subalaribus et subcaudalibus ejusdem coloris; rostro et pedibus nigris.

Long. circa $10\frac{1}{2}''$, rostr. $10'''$, al. $4''\ 3'''$, caud. $4''\ 3'''$, tars. $12\frac{1}{2}''$.

Hab. Damaraland (*Andersson*).

Obs. A typical species, allied to *C. jardinii*. One example has been submitted to my examination by Mr. P. L. Selater.

The true *Crateropi* known to me are the following;—

1. *C. bicolor*, Jard. Afr. mer.
2. *C. reinwardtii*, Sw. Afr. occid.
3. *C. platycercus*, Sw. Afr. occid.
4. *C. jardinii*, Sw. Afr. mer. et inter.
5. *C. limbatus*, Harr. Afr. orient.
6. *C. plebejus*, Rüpp. Afr. orient. et inter.
7. *C. cinereus*, Heugl. Afr. orient.
8. *C. swainsonii*, Sw. Afr. mer.
9. *C. gymnogenys*, Hartl. Afr. mer. occid.
10. *C. leucocephalus*, Rüpp. Afr. or.
11. *C. leucopygius*, Rüpp. Afr. or.
12. *C. melanops*, Hartl. Afr. mer. occid.
13. *C. apicalis* (Licht.). Afr. occid.
14. *C. chalybeus*, Bp. Palæstina.
15. *C. rubiginosus*, Rüpp. Afr. orient.
16. *C. rufescens*, Heugl. Afr. or.
17. *C. fulvus* (Desfont.). Algeria.
18. *C. acaciæ*, Rüpp. Afr. sept. orient. (less typical).
19. *C. squamiceps*, Rüpp. Arabia (less typical).
20. *C. atripennis*, Sw. Afr. occid. (less typical).

Crateropus melodus, Heugl., is very nearly allied to (if not identical with) *Parisoma frontale* of Rüppell. *Crateropus guttatus*, Heugl., is congeneric with my *Bradyornis spekei* (= *Cichladusa arquata*, Peters). Neither of them belong to this group.

6. Notice on the Pheasants found in the Neighbourhood of Pekin. By DUDLEY E. SAURIN*.

The Pheasants I am acquainted with as occurring near Pekin are the following:—

1. The common Chinese Pheasant, in Chinese *Yeh-chi*, or “Wild fowl” (*Phasianus torquatus*), which is found everywhere in the north of China. I am not aware how much further south they are found than Shanghai; but in that neighbourhood, since the devastation of the country by the Tai-pings, they are shot by hundreds. Thousands are brought down to the Pekin market in a frozen state by the Mongols from as far north as the Amour. At the new

* Mr. Saurin, to whom we are indebted for two fine males of the Pallas's Eared Pheasant (*Crossoptilon auritum*), has kindly drawn up these notes at my request.
—P. L. S.

Russian port of Poussiet, conterminous with Corea, the same Pheasant abounds. I myself have seen them wild in the Imperial hunting-grounds north of Jehol, and in the mountains near Ku-peh-kow.

2. The *Pucrasia xanthospila**, by the Chinese called *Sung-chi*, or "Pine-fowl." This bird is always to be found in the Pekin market, though in far inferior numbers to the Common Pheasant; they are brought unfrozen, and sometimes alive, and never, as far as I have seen, by the Mongols; they consequently are probably confined to the mountains enclosing China proper on the north and west. The only place from which, to my knowledge, they have been brought is the Tung-lin, or eastern woods, where are the tombs of the present dynasty, about 100 miles north-east of Pekin, amongst the issues of the mountains which run down into the plain east of Ku-peh-kow, or the old north gate through the Great Wall. The *Sung-chi* is considered very good eating, and its flesh has a rather peculiar aromatic flavour.

3. The Reeves's Pheasant (*Ph. reevesii*), called by the Chinese *Chi-chi*, is seen very rarely in the Pekin market. For a long time I failed to discover from what quarter they came, as some specimens had been obtained at Tientsing, and some people pretended they were brought from Shantung. Last winter, however, I ascertained that they, too, came from the Tung-lin; and I have reason to suppose that they are to be found nowhere else in the province of Chi-li. About twenty birds were brought down alive last winter. They are never brought in frozen, or by Mongols. Their flesh is very delicious, and superior, to my taste, to that of any other Pheasant.

4. Pallas's Eared Pheasant (*Crossoptilon auritum*) is found rarely in the market, though perhaps oftener than the Reeves's Pheasant. It is *not* found in the Tung-lin, but in the mountains to the north-west of Pekin, within the Great Wall, about 100 miles distant. The place is well known for its coal-mines, and has frequently been visited by Europeans, amongst others by the French Minister, M. Berthéney, the French Missionaries, and several of our Student Interpreters. M. Berthéney, who is a sportsman and fond of natural history, thinks that, taking into consideration the comparative tameness of the bird, and the fact that since Europeans have come to Pekin the peasants have always found a good market for the nests, this rare bird, which, so far as we know, is only to be found at this one spot, cannot fail soon to become extinct. Chinese guides, it is true, have assured me that it is to be found in the Wei-chung, or Imperial hunting-grounds, which I passed through last autumn; but no reliance can be placed on their statements, even if the bird were called by the same name in so very distant a part of the country.

The Chinese name is *Ho-chi*, either "River-fowl" or "Fire-fowl." The translation depends on the character; and the peasants, who give it the name, know nothing of characters; while the students, who know characters, are quite ignorant of natural history.

Pallas's Pheasant is never brought by Mongols, or frozen; therefore '*mantchuricum*' (the name applied to it by Mr. Swinhoe) is a

* Described and figured by Mr. G. R. Gray, P. Z. S. 1864, p. 259, pl. xx.

misnomer. The hen lays towards the end of May; the egg is larger than a common fowl's, and, as far as I recollect, rather bluish in tint. The Chinese, who bring these birds in, feed them with a kind of millet-cake; they are also very fond of barley, which is grown in quantities in the mountain-valleys.

7. Description of a New Species of *Atrichia* from the Richmond River, New South Wales. By E. P. RAMSAY, C.M.Z.S.

ATRICHIA RUFESCENS, nov. sp.

All the upper surface rufous brown, becoming rufous on wings and tail; each feather, except those of the wings and tail, crossed by three crescent-shaped lines of blackish brown; underside of the wings and inner webs of primaries and secondaries dark brown, tertiaries and outer webs of primaries and secondaries crossed with wavy zig-zag lines of black; under wing-coverts brown, edged with rufous; upper tail-coverts and both the upper and under side of all the tail-feathers deep rufous, crossed by numerous distinct wavy lines of black; ear-coverts, cheeks, and sides of the throat and neck rufous, barred indistinctly with dark brown, becoming more distinct on sides of chest, which is rufous; throat whitish; rest of the under surface deep rufous, becoming brighter and of a much deeper tint on centre of abdomen and under tail-coverts; flanks deep rufous, crossed with narrow wavy lines of blackish brown; irides dark brown; bill dark horn-colour, becoming whitish on lower mandible; legs and feet light reddish brown; claws light horn-brown.

Total length $6\frac{2}{10}$ inches; bill $\frac{7}{10}$ in length, in height $\frac{2}{10}$, width $\frac{2}{10}$; tarsi $8\frac{1}{2}$ tenths; claw of hind toe $3\frac{1}{2}$ tenths; claw of middle toe $\frac{9}{10}$; wing $2\frac{4}{10}$ inches; tail $2\frac{9}{10}$.

I propose the specific name of *rufescens* for this species, as being most appropriate. Two males were all that were procured. These were shot in the thick brushes on the borders of the Richmond River, about the end of December 1865, by that well-known ornithologist Mr. T. MacGillivray, from whom I purchased the present specimen. *Atrichia rufescens* may at once be distinguished from *A. clamosa* of the west coast by its smaller size and the rufous tint which pervades the whole plumage. The legs and claws are much larger in proportion to the size of the bird than those organs in the much larger species *A. clamosa*; the claw of the hind toe is exactly the same in size as that in *A. clamosa*.

A specimen of *A. clamosa*, now before me, kindly lent to me by G. Krefft, Esq., Curator of the Australian Museum, Sydney, being one of those procured in Western Australia by Mr. G. Masters in March 1866, differs slightly from Mr. Gould's description given in his 'Handbook to the Birds of Australia' (vol. i. p. 345), in the following particulars, viz.:—The throat, chest, and abdomen pure white; an irregular triangular patch of black feathers edged with

white runs down from the centre of the throat, widening on the chest and spreading out at its base, joins the sides of the neck above the shoulders; underside of the tail-feathers dark brown, outer webs only freckled with a darker hue; under tail-coverts brown, barred with blackish brown, and margined with rufous brown. Total length 8 inches, wing $2\frac{9}{10}$ inches, tail 4 inches.

It is a curious fact that the specimens of *A. clamosa* and *A. rufescens*, procured by Gilbert, MacGillivray, or Masters are all males.

8. Remarks upon the New Species of *Atrichia* and on *A. clamosa* of the West Coast. By E. P. RAMSAY, C.M.Z.S.

Since I last forwarded my description of the new *Atrichia*, for which I proposed the specific name of *rufescens*, I find that Mr. James F. Wilcox procured the birds during an excursion made by Messrs. Wilcox and MacGillivray to the brushes of the Richmond River. Mr. Wilcox, therefore, is its discoverer, and not Mr. MacGillivray as I had stated.

I have just received a very interesting note from Mr. J. F. Wilcox, in which he gives us the following valuable account of his discovery, which, I think, I cannot do better than give in his own words:—

“In answer to your inquiries respecting the *Atrichia*, I have much pleasure in sending you all the particulars, which I take from my notes made at the time, November 17, 1865:—‘In the Bowling Creek, Richmond River, in a dense scrub, in pursuit of Rifle-birds (*Ptiloris paradisea*), my attention was drawn to the note of a bird I had never before heard, and from that moment I knew it would prove a prize should I have the good luck to procure it. I followed it up on my hands and knees (for the scrub was too thick to stand up in) until the voice appeared almost at the muzzle of the gun; here I remained fixed quite half an hour, and during that time I can scarcely describe my feelings. I was almost inclined, although not superstitious, to think some evil spirit was playing me a trick; for at one moment it would give out its own notes apparently just in front of me, and the next minute mimic the Spine-tailed Orthonyx (*O. spinicauda*) in another direction; then the Scrub-Robin’s note would be imitated in some other place; and even sometimes its voice seemed to come from the ground, at other times from the trees above me.’

“This state of things lasted until I became painfully cramped from the position I had to lie in, and my eyes painful from staring about so long. I was just about to give up, when, to my delight, I saw my tormentor hop from one bush to another, not more than 7 or 8 feet from where I had been lying the whole time. But the scrub was so densely thick I could not bring the gun to bear on it; but marking well the spot where the bird was sitting, I managed to back a little through a narrow open place, fired, and to my intense satisfaction succeeded in bringing it down. During the whole time

I am positive the bird kept in the same place ; and yet its mimicking voices were heard in different places."

In a former note from Mr. T. MacGillivray, that gentleman remarks, "They were both noisy enough, mimicking *Sericornis citreogularis* and several other brush-birds, besides having a note peculiarly their own. Both were males."

This is a great source of regret, as neither did the late Mr. Gilbert, nor Mr. G. Masters during his recent trip to Western Australia, procure the other sex of *A. clamosa* ; so we are still in the dark as to the females of either species. But now that we have an *Atrichia* inhabiting a district so near Sydney I hope we shall not long remain in ignorance upon this point.

The same wonderful power of ventriloquism noted above shows itself also in *Atrichia clamosa*. Mr. Masters informs me that he was greatly perplexed in searching for this species in Western Australia, where it inhabits dense masses of vegetation consisting of tall reedy grass and thick-growing low bushy shrubs. A whole morning was spent without a single glimpse of the bird, although its note was frequently heard within a few feet of where he was standing, first seeming to come from one side, then from another, then sounding loud and clear a few feet in front.

Upon another occasion, while passing a thicket of reeds, grass, and scrub, Mr. Masters observed one run in and disappear in a moment, without giving him a chance of bringing his gun to bear on it. As it was useless, even if possible, to follow it, he lay down at a short distance from the edge and determined to wait until the bird reappeared ; after a considerable time he was rewarded by seeing its head poke out ; and after looking round to see if the coast was clear, the bird came out and commenced to scratch in the sand, giving him an opportunity which was not lost.

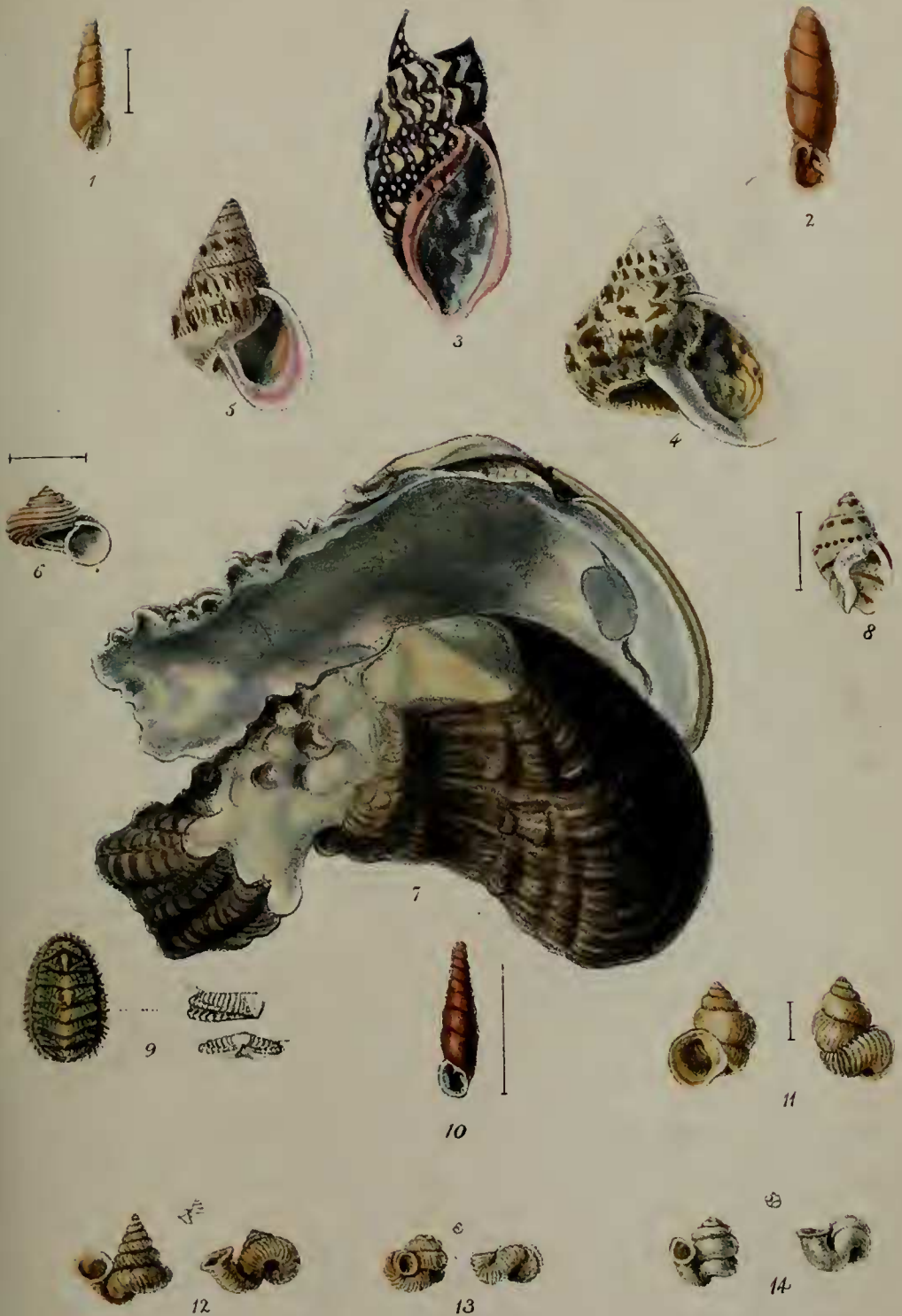
Ventriloquism is not confined to the *Atrichiæ*. I have myself been sorely at a loss to find *Oreoica gutturalis*. I have also observed ventriloquism in the *Cincloramphi*, as well as in *Ptenoedus rufescens*.

9. List of Land and Freshwater Shells collected by Mr. E. Bartlett on the Upper Amazons, and on the River Ucayali, Eastern Peru, with Descriptions of New Species.
By HENRY ADAMS, F.L.S.

(Plate XXXVIII.)

Fam. AMPULLARIIDÆ.

1. POMUS YATESI, Reeve.
2. POMUS NOBILIS, Reeve.
3. POMUS AMAZONICUS, Reeve.



G. SOWERBY LITH.

MANHART IMP.



4. POMUS HÆMASTOMUS, Reeve.
5. POMUS LYMNÆIFORMIS, Reeve.
6. POMUS PAPYRATIUS, Spix.
7. POMUS NUBILUS, Reeve.

Fam. HELICIDÆ.

8. RUMINA (OBELISCUS) RIPARIA, Pfr.
9. RUMINA (OBELISCUS) PUSILLA, sp. nov. (Pl. XXXVIII. fig. 1.)

R. *testa imperforata, turrita, tenuiuscula, striata, parum nitente, pallido-fulva; spira elongata, apice obtusiuscula, sutura impressa, non marginata; anfr. 7, planiusculis, ultimo $\frac{1}{4}$ longitudinis æquante, basi rotundato; columella superne vix torta; apertura parva, ovali; perist. simplici, recto, margine dextra leviter arcuato, columellari reflexiusculo.*

Long. 8, diam. 2 mill.

10. RUMINA (SUBULINA) OCTONA, Chem.

11. CLAUSILIA (NENIA) BARTLETTI, sp. nov. (Pl. XXXVIII. fig. 2.)

C. *testa non rimata, pupiformi, solidula, longitudinaliter oblique undulato-striata, haud nitente, purpurascente; spira convexo-turrita, apice obtuso, sutura pallidiore; anfr. 7, convexiusculis, ultimo angustato, deorsum soluto, basi rotundato, antice confertim striato; apertura subverticali, ampla, pyriformi; lamellis convergentibus, superiore valida, inferiore flexuose ascendente; lunella distincta; plica palatali 1, supera, elongata, subcolumellari inconspicua; perist. continuo, libero, pallidiore, undique late expanso, reflexiusculo.*

Long. 24, diam. 6 mill.

12. LABYRINTHUS FURCILLATUS, Hupé.
13. LABYRINTHUS BIFURCATUS, Desh.
14. LABYRINTHUS LEPRIEURII, Petit.
15. AMMONOCERAS GUAYAQUILENSE, Pfr.
16. OPHIOGYRA STENOGYRA, Pfr.
17. OPHIOGYRA STENOSTREPTA, Pfr.
18. BULIMUS MAXIMUS, Sow.
19. BULIMUS (DRYPTUS) MELANOCEILUS, Nyst.
20. BULIMUS (EURYTUS) PIPERITUS, Sow.
21. BULIMUS (EURYTUS) FLOCCOSUS, Pfr.

22. *BULIMUS* (ORPHNUS) *TENIOLUS*, Nyst.

23. *OTOSTOMUS* *CRICHTONI*, Brod.

A single example only, and in bad condition. The typical specimen in the British Museum has hitherto been unique.

24. *OTOSTOMUS* *EXPANSUS*, Pfr.

25. *OTOSTOMUS* *CANALICULATUS*, Pfr.

26. *OTOSTOMUS* *PULCHERRIMUS*, sp. nov. (Pl. XXXVIII. fig. 3.)

O. testa subperforata, fusiformi, tenuiuscula, obsolete irregulariter striata, lævigata, albida, strigis nigricanti-castaneis albo punctatis, supra flexuosis, infra disjunctis et macularum series 2 formantibus, ornata; spira turrata; anfr. ?, modice convexis, ultimo basi compresso et valde obtuse carinato; columella arcuata; apertura parum obliqua, rhombeo-ovali; perist. roseo, marginibus callo tenui junctis, dextro expanso, columellari reflexo, superne adnato.

Long. circa 45, diam. 17 mill.

One example only of this beautiful species has been obtained; and of that unfortunately the upper whorls are deficient.

27. *OTOSTOMUS* *BARTLETTI*, sp. nov. (Pl. XXXVIII. fig. 4.)

O. testa umbilicata, globoso-conica, tenuiuscula, irregulariter striata et lineis minutissimis spiralibus confertim decussata, albida, fascia castanea interrupta albo punctulata et flammis fuscis picta; spira conica, obtusiuscula; anfr. 5, planiusculis, ultimo ventricosus, ascendente, spiram paulo superante, basi obtuse carinato; apertura subverticali, obliqua, subovali; perist. tenui, undique late expanso.

Long. 25, diam. maj. 26, min. 18 mill.

Two examples, one in good condition, of this very finely marked and interesting species were obtained by Mr. Bartlett.

28. *OTOSTOMUS* *SCITUS*, sp. nov. (Pl. XXXVIII. fig. 5.)

O. testa rimato-perforata, ovato-pyramidata, tenuiuscula, irregulariter subrugoso-striata et lineis spiralibus minutis obsolete decussata, luteo-alba, striga interrupta fusca et maculis sparsis ornata; spira conica, apice acuto; anfr. 6, planiusculis, ultimo spiram paulo superante, rotundato, basi compresso, circa perforationem obtuse carinato; columella contorta; apertura verticali, lata, rotundato-auriformi, intus violacea; perist. simplici, undique late expanso.

Long. 28, diam. maj. 17, min. 13 mill.

One example only.

29. *OTOSTOMUS* (*DRYMÆUS*) *MUSIVUS*, Pfr.

30. *OTOSTOMUS* (*DRYMÆUS*) *MONTAGNEI*, D'Orb.

31. *OTOSTOMUS* (*LEPTOMERUS*) *HELOICUS*, D'Orb.

32. *OTOSTOMUS* (*MORMUS*) *EXORNATUS*, Reeve.

- 33. OTOSTOMUS (MORMUS) TORAYLI, D'Orb.
- 34. OTOSTOMUS (LEIOSTRACUS) MACULATUS, Lea.
- 35. TORNATELLINA (LEPTINARIA) LAMELLATA, Pot. & Mich.
- 36. ORTHALICUS GALLINA-SULTANA, Chem.
- 37. ORTHALICUS BENSONI, Reeve.
- 38. ORTHALICUS (CORONA) REGINA, Férus.
- 39. ORTHALICUS (PORPHYROBAPHE) YATESI, Pfr.
- 40. ORTHALICUS (PORPHYROBAPHE) LABEO, Brod.

The single example collected by Mr. Bartlett is the third known of this peculiar species. The typical specimen was once in the possession of the Society, but mysteriously disappeared. The second, which was sent home by Mr. Lobb from Limabamba, Peru, formed part of the collection of the late Mr. Cuming, and is now in the British Museum.

Fam. OLEACINIDÆ.

- 41. GLANDINA DACTYLUS, Brod.
- 42. GLANDINA CARMINENSIS, Morel.
- 43. STREPTAXIS DEFORMIS, Férus.

Fam. CYCLOPHORIDÆ.

- 44. APEROSTOMA BLANCHETIANUM, Moric.
- 45. APEROSTOMA CONNIVENS, sp. nov. (Pl. XXXVIII. fig. 6.)

A. testa late umbilicata, depressa, tenuiuscula, striatula et inæqualiter lirata, albida, epidermide flavide brunnea induta; spira parum elevata, apice prominulo, levi, rufo-corneo, sutura canaliculata; anfr. 4½, convexis, ultimo non soluto; apertura fere circulari, diagonalis; perist. continuo, recto, superne subangulato et breviter adnato.

Diam. maj. 10, min. $8\frac{1}{2}$, alt. 7 mill.; apert. diam. $4\frac{1}{2}$ mill.

This species is closely allied to *A. perdistinctum*, Gund.; but the suture is less deeply canaliculated, the last whorl is not separated in front as in that species, and the raised spiral lines on the whorls are reduced to one on the inner side within the umbilicus.

Fam. HELICINIDÆ.

- 46. HELICINA (OLIGYRA) SPRUCEI, Pfr.
- 47. HELICINA (PACHYSTOMA) CONCENTRICA, Pfr.

Fam. UNIONIDÆ.

- 48. ANODONTA (LAMPROSCAPHA) WHEATLEYI, Lea.

49. ANODONTA (LAMPROSCAPHA) ENSIFORMIS, Spix.

50. MONOCONDYLÆA (PLAGIODON) ? ISOCARDIOIDES, Lea.

Fam. MYCETOPIDÆ.

51. MYCETOPUS SOLENIFORMIS, D'Orb.

Fam. MUTELIDÆ.

52. CASTALIA CORDATA, Humph.

53. LEILA GIGANTEA, Lea.

54. LEILA BLAINVILLIANA, Lea.

55. TRIQUETRA CORRUGATA, Lam.

Several examples of this very fine species in most perfect condition.

56. TRIQUETRA OBLIQUA, Schum.

Fam. ÆTHERIIDÆ.

BARTLETTIA, gen. nov.

Testa libera, æquivalvis, inæquilateralis, clausa; superficies valvarum rugosa vel foliata, epidermide olivaceo-viridi induta. Cardo edentulus; ligamentum breve, crassum, præcipue internum, laminis validis, curvatis, prominentibus suffultum; impressiones musculares duæ, anterior elongata, angusta, posterior ovalis, ampla; linea pallialis simplex. Intus margaritacea.

57. BARTLETTIA STEFANENSIS, Moric. (Pl. XXXVIII. fig. 7.)

B. testa falcata, solidiuscula, antice irregulariter producta, angusta, torta, postice rotundata, margine ventrali valde sinuato, anteriore lobato; superficie valvarum antice irregulariter rugose plicata, postice angulata, concentrice crasse striata.

Long. 75, lat. maj. 35, minor 20, alt. 27 mill.

Etheria stefanensis, Moric. Journ. Conch. v. (1856) p. 178.

This singular shell was first met with by M. Porte in the Amazon, near its embouchure, and was described by M. Moricand as a species of *Ætheria*. M. Moricand supposed it to be adherent like the other species of that genus, and probably by a small portion of the surface of one valve near the beak, which was broken away in both of the specimens received by him. There are no traces, however, of any such adherence in the more perfect examples collected by Mr. Bartlett; and the shell, not possessing this peculiarity, and differing also materially in other respects from *Ætheria*, forms, in my opinion, the type of a distinct genus. The other differences to which I allude are:—the ligament being marginal like that of *Anodonta*, and not sunk in a groove of the area of one valve; the internal surface being without the blisters present in both the species of the African genus;

and the form being nearly æquivalve (which is, I think, in itself strong evidence of its not being attached either to other individuals or to foreign substances).

This shell is probably rare, and therefore valued by the natives in the localities where it has been found, as some of the valves sent home by Mr. Bartlett are perforated at the small ends, apparently for the purpose of being worn as ornaments.

10. Descriptions of Six New Species of Shells, and Note on
Opisthostoma de-Crespignii. By HENRY ADAMS, F.L.S.

(Plate XXXVIII.)

Fam. BUCCINIDÆ.

NASSODONTA, gen. nov.

Testa ovalis; spira brevis, anfractu ultimo antice sulcato; apertura antice sinuata, postice canaliculata; columella callosa, antice plicata; labrum acutum, intus incrassatum et dentatum, extus antice denticulo instructum.

1. NASSODONTA INSIGNIS, sp. nov. (Pl. XXXVIII. fig. 8.)

N. testa ovata, solida, lavi, luteo-alba, fasciis fuscis tribus interruptis ornata; spira brevi, apice obtusiusculo, sutura simplici; anfr. 5, convexis, ultimo $\frac{2}{3}$ longitudinis testæ adæquante, basi transversim 1-sulcato; apertura subovali, angusta; columella valde arcuata, callosa, alba, postice callo mediocri munita; labro acuto, albo, intus incrassato et 2-dentato; sinu siphonali amplo.

Long. 11, diam. 6 mill.

Hab. River Peiho, China, in company with *Velorita*.

Fam. CHITONIDÆ.

FREMBLEYA, gen. nov.

Testa ovalis, convexa. Valvæ transversæ, latæ, carinatæ; apex posterioris valvæ terminalis, producta, fissa. Limbus angustus, postice fissus, setis corneis dense obsitus.

The covering of the mantle, the form of the visible portions of the valves, and the peculiarity of the terminal valve render this species distinct from any form of Chitonidæ yet described. It has the appearance of a *Lorica* with the mantle covered with long bristles instead of imbricate scales.

2. FREMBLEYA EGREGIA, sp. nov. (Pl. XXXVIII. fig. 9.)

F. testa ovata, antice paululum angustiore, viridi-fusca, ad latera pallidiore; valva antica radiatim costata, costis pustulosis, inter-

stitiis oblique liratis; valva postica et valvis mediis subcarinatis, areis dorsalibus dense longitudinaliter liratis, areis lateralibus radiatim costatis, costis pustulosis. Limbus mediocris, spiculis brevibus corneis instructus.

Long. 15, lat. 9 mill.

Hab. —?

Fam. HELICIDÆ.

3. CLAUSILIA (PHÆDUSA) SIMILARIS, sp. nov. (Pl. XXXVIII. fig. 10.)

C. testa vix rimata, fusiformi, solida, confertim striata, sericea, rufo-fusca; spira sursum attenuata, apice obtuso; anfr. 10, convexiusculis, ultimo basi rotundato; apertura subverticali, pyriformi; lamellis inæqualibus, supera tenui, marginali, infera fere immersa; lunella distincta, extus conspicua; plica palatali 1, elongata, subcolumellari ad marginem peristomatis producta; perist. continuo, superne breviter soluto, expanso, albido.

Long. 18, diam. $4\frac{1}{2}$ mill.

Hab. Formosa.

This species, which was collected by Mr. Swinhoe in Formosa, I have placed in the subgenus *Phædusa*. It is closely allied to *C. exilis*, described by me in a former paper, and referred to the subgenus *Laciniaria*, but which must also be included in *Phædusa*.

Fam. CYCLOPHORIDÆ.

4. DIPLOMMATINA (DIANCTA) MARTENSI, sp. nov. (Pl. XXXVIII. fig. 11.)

D. testa sinistrorsa, rimata, pupiformi, gibbosa, tenui, flavida, subremote minutissime striolata; spira conica, sutura impressa, apice obtusiusculo; anfr. 6, convexis, penultimo angustiore, ultimo ad antepenultimum ascendente; apertura subverticali, plica columellari obsoleta; perist. duplici, expanso; callo parietali crasso, late expanso, appresso.

Long. $3\frac{1}{3}$, diam. 2 mill.

Hab. —?

Fam. UNIONIDÆ.

5. ANODONTA SWINHOEI, sp. nov.

A. solidula, transversa, oblongo-ovata, subventricosa, concentricè obsolete plicata; margine dorsali elongato, subrecto; margine ventrali arcuato; latere antico rotundato; latere postico subangulato, superne obsolete radiatim plicato; umbonibus antemedianis, inconspicuis; epidermide olivaceo-picea induta; marginata cærule, postice iridescente.

Long. 90, alt. 50, lat. 28 mill.

Hab. Formosa.

Several examples of this species, which does not appear to have been hitherto described, were obtained by Mr. Swinhoe.

Fam. MUTELIDÆ.

6. *SPATHA BAIKII*, sp. nov.

S. testa solidula, transversa, ovata, ventricosa, antice angusta, rotundata, postice lata, subrotundata; margine dorsali arcuato; margine ventrali in medio sinuato; epidermide nigro-fusca; umbonibus antemedianis, inconspicuis, erosis; margarita salmonaceo-purpurea.

Long. 120, alt. 80, lat. 45 mill.

Hab. River Niger.

I have named this species after my lamented friend Dr. Baikie, by whom it was collected. It differs from *S. rubens*, to which it approaches most nearly in form, in being more ventricose, broader and more rounded posteriorly, and in having a greater sinuation of the ventral margin. It is also a larger shell, and the epidermis is of a darker colour.

Note on Opisthostoma de-Crespignii.

Since describing the shell of this species, some examples having the animal dried within them have come into my possession; and by breaking one of them carefully and extracting the animal I have ascertained that it is provided with an exceedingly minute and very thin horny operculum. As, from its helix-like appearance and very elongated and porrected mouth, it is more singular even than the type of the genus, *O. nilgiricum*, a figure of it is now given (Pl. XXXVIII. fig. 12), none having hitherto been published.

M. de Crespigny has suggested that this genus may be identical with the fossil *Scoliotoma*, which, however, has hitherto been regarded as marine. Its resemblance to the type of *Scoliotoma*, *S. dannenburgi*, is very strong; and if they are not generically the same, the very singular fact must certainly be admitted that a group of recent land-shells exists possessing this peculiar form in common with a group of extinct marine shells.—H. ADAMS.

11. On *Opisthostoma*, H. Blanford, with the Description of a New Species from the Neighbourhood of Bombay, and of the Animal and Operculum. By WILLIAM T. BLANFORD, Assoc. Roy. Sch. Min., F.G.S.

(Plate XXXVIII.)

To the keen search of one of the most indefatigable and successful collectors of land shells in India, the Rev. S. Fairbank, is due the very interesting discovery of a second species of the remarkable Cyclostomaceous genus *Opisthostoma*, the type of which was first found by my brother, Mr. H. F. Blanford, on the Nilgiri hills of

Southern India in 1857. The rediscovery of the genus is none the less fortunate, that specimens of the original species are so excessively rare that it has been impossible to distribute them so as to make the form known in Europe. I have on two separate occasions, in 1859 and 1864, searched the neighbourhood of Pykara, on the Nilgiris, without success, and, owing to an unfortunate accident, by which most of the original specimens were lost, I believe that but two now remain, one of which is in my own collection, and another in Mr. Benson's. Several specimens of the new species have, fortunately, been obtained; and it is to be hoped that the number may be increased, as the locality is easy of access.

The new form is a very near ally of *O. nilgiricum**, H. Blanf. (Pl. XXXVIII. fig. 13), but still readily distinguished by several not unimportant characters. Specimens have, fortunately, been obtained living, enabling me to complete the characters of the genus, and to confirm the opinion expressed by my brother, in our joint paper, of its being an operculated form. Although I have not succeeded in examining the animal so closely as I could have wished, I have been able to note the form of the tentacles, with the position of the eyes, and to see the operculum. All tend, I think, to bear out the views I expressed, in 1864†, as to the affinities of the genus.

Before proceeding to any further remarks, it will be well to describe the new species, and to give the generic characters as now ascertained.

OPISTHOSTOMA, H. Blanf.

Testa anguste umbilicata, umbilico interdum ab anfractu ultimo obtecto, irregulariter pupæformis, costulata, anfractibus apicalibus deflexis, anfr. ultimo constricto ibidem angulo acuto deflexo, retro curvato, denique sinistrorsum ascendente. Apertura retrorsa, circularis vel subcircularis. Operculum tenue, corneum, concentricè paucispirale, profunde retractum. Animal tentaculis brevibus, cylindricis, obtusis, oculis ad basin externam tentaculorum sessilibus, lateraliter positis sed Cyclophoridarum altioribus. Pes brevis. Proboscis brevissima.

OPISTHOSTOMA FAIRBANKI, n. sp. (Pl. XXXVIII. fig. 14.)

Testa irregulariter ovata, albida, confertim costulata, lineis impressis spiralibus minutis, vix sub lente conspicuis, sæpe obsoletis, inter costulas signata. Spira breviter subcylindrica, apice perobtusio, sutura profunda. Anfr. 5, rotundati, duo apicales parum exserti, ex axi deviantes, tertius multo major, quartus maximus, quintus brevissime constrictus, ad stricturam angulo acuto versus umbilicum deflexus, in figuram literæ S curvatus, umbilicum omnino tegens, denique sinistrorsum ascendens, anfractus penultimus undique junctus. Apertura postica,

* Described and figured in the 'Journal of the Asiatic Society of Bengal,' vol. xxix. p. 121, 1860. The figures are very good.

† Ann. and Mag. Nat. Hist. ser. 3. vol. xiii. p. 444.

verticalis, subtrigonal-rotundata; peristoma simplex, undique expansum. Operculum normale.

Diam. incl. peristom. 1.5 mm.; perist. non incl. 1 mm.; alt. 1.5 mm.; aperturæ diam. circa 0.5 mm.

Hab. prope Khandalla ad summos montes "Syhadri" sive Western Ghats appellatos, inter Bombay et Poona, Indiæ orientalis.

The animal was very difficult to observe, on account of its extreme shyness and minute size. Only a very small portion of the body was extruded from the shell. The foot is very short and apparently rounded, but could not be seen fairly, as the animal would not crawl up a glass but appeared to endeavour to hide itself amongst decayed leaves. The tentacles are short and blunt, the eyes at their outside base, rather high in position, but not nearly so much so as in the *Aciculaceæ*. The whole animal is white and translucent, the eyes appearing as black specks, perfectly sessile. After two or three failures I succeeded in examining an operculum by breaking back the whorls of a specimen carefully until I came to it. It is lodged at the constriction in the last whorl, as long since suggested by Mr. Benson, and is distinctly horny, concentric, and paucispiral, resembling the figure of the operculum of *Diplommatina folliculus* given in Adams's 'Gen. Rec. Moll.' This entirely confirms the views I long since expressed as to the close affinity of *Opisthostoma* to *Diplommatina*, and shows the former, moreover, to be nearer to the typical costulate *Diplommatinæ* of the Himalaya than to the smooth or spirally lirate species (*Arinia*, H. & A. Ad.) of Hindustan, as the latter have the spiral structure apparently obsolete*. It is worthy of remark that some of the Pupinidæ (e. g., *Pupina artata*, Bens.), when their opercula are examined by transmitted light, show an apparently paucispiral structure, due to the whorls increasing in size more rapidly near the centre; but the construction of the spiral in *Pupina* and *Cataulus* has been shown to be different from that which obtains in other forms of operculated land shells.

The characters which serve to distinguish *Opisthostoma fairbanki* from *O. nilgiricum* are:—

1. The greater exsertion and smaller excentric deflection of the two apical whorls of *O. fairbanki*.

2. The simple expanded peristome and subtrigonally rounded aperture—*O. nilgiricum* having a non-expanding duplicate peristome, the outer portion retro-relict, and a circular aperture.

3. The more distant sculpture.

4. The manner of curvature of the last whorl, the posterior bend of which is much more acute in the present species. In *O. nilgiricum* the posterior half of the sigmoid curve of the last whorl is more open than the semicircular curve nearer the aperture, the umbilicus being fully exposed within the former. In *O. fairbanki* the anterior curve is the more open, and the last whorl just in front of the pos-

* I have just cut out the opercula of two specimens of *Diplommatina pachycheilus*, Bens., from Darjiling, and find the spiral structure much less distinct than it usually is in the Cyclophoridæ.

terior half of the curve passes across and completely conceals the umbilicus.

I have, with some difficulty, detected in *O. fairbanki* the minute decussating striæ observed by my brother between the costulations in *O. nilgiricum*. They are very difficult to see, even under a high power and strong light, and appear to be frequently obsolete. I cannot detect them in my specimen of *O. nilgiricum*, which is in good order.

The bluntly trigonal form of the aperture in *O. fairbanki* does not appear to be quite constant; the mouth in some specimens is nearly round.

The locality at Khandalla, at the top of the well-known Bhore-Ghat incline on the railway between Bombay and Poona, is some distance down a ravine behind the graveyard, below the hill known as the Duke's Nose. The mollusk lives amongst dead leaves, in the same manner as *Diplommata*, but, except in very wet weather, it appears to bury itself in the ground.

In the paper already referred to, published in the 'Annals and Magazine of Natural History' for June 1864, I gave my reasons for believing in the affinity of *Opisthostoma* and *Clostophis* to *Diplommata*, instead of to the Pupinidæ, to which Dohrn had referred the first named (in 'Malakoz. Blätter,' vol. x. p. 39), and I also showed that the position assigned by Dr. Pfeiffer to *Diplommata* in his valuable 'Monograph' was unnatural. In the Second Supplement to the 'Monograph,' which has since appeared, Dr. Pfeiffer follows my opinion only so far as to assign *Clostophis* to the Diplommatinidæ, while he leaves this family with the Aciculidæ in the suborder Opisthophthalma, and relegates *Opisthostoma* together with *Arinia* to the subfamily Pupininae of the family Cyclophoridae, under the suborder Ectophthalma. To *Arinia* he, moreover, assigns the two species described by my brother and myself as *Diplommatinæ*, from the hills of Southern India, *D. nilgirica* and *D. kingiana*. Had Dr. Pfeiffer seen the two last-named species, he would, I think, scarcely have dissociated them so widely from their nearest relatives the Western Himalayan *Diplommatinæ*, one of which, it should be remembered, is the type of the genus. It may be correct to class *Arinia* with *Pupina*; but I cannot help doubting whether the smooth *Diplommatinæ* of South India belong to the same genus as the Philippine *Cyclostoma minus* of Sowerby, the type of *Arinia*; and I am persuaded that the association of *Diplommata* with *Acicula* and *Truncatella* is an utter violation of all natural affinities. In no single character of shell, animal, or operculum does *Diplommata* approach to the Opisthophthalma, so far as I am aware. Its affinities are most unmistakeably with the Ectophthalma; and I believe that its proper position is as the type of a subfamily of the Cyclophoridae, which subfamily would include *Opisthostoma* and the smooth species of Southern India, and probably *Clostophis*. Whether *Arinia* should be classed with it or not, I am not prepared to say.

DESCRIPTION OF PLATE XXXVIII.

- Fig. 1. *Rumina (Obeliscus) pusilla*, p. 441.
 2. *Clausilia (Nenia) bartletti*, p. 441.
 3. *Otostomus pulcherrimus*, p. 442.
 4. — *bartletti*, p. 442.
 5. — *scitus*, p. 442.
 6. *Aperostoma connivens*, p. 443.
 7. *Bartlettia stefanensis*, p. 444.
 8. *Nassodonta insignis*, p. 445.
 9. *Frembleya egregia*, p. 445.
 10. *Clausilia (Phædusa) similaris*, p. 446.
 11. *Diplommatina (Dianeta) martensi*, p. 446.
 12. *Opisthostoma de-crepignii*, p. 447.
 13. — *nilgiricum*, p. 448.
 14. — *fairbanki*, p. 448.

12. Corrections and Addenda to certain Papers on Lepidoptera published during the years 1865–66; with Additional Notes on some of the Species described. By ARTHUR G. BUTLER, F.Z.S., Assistant, Zoological Department, British Museum.

I regret to find that, having relied too much upon the completeness of a recently published list of Diurnal Lepidoptera, I have, in several of my papers, overlooked species. This error has in some cases been the means of leading me to redescribe insects; and to these I propose in the present paper to restore their rightful names.

As I have lately had the advantage of seeing several types, and additional specimens, of insects which I have mentioned, I am now enabled to correct or add to any remarks which I may have made with regard to them.

PAPILIO.

In a paper published in the 'Annals and Magazine of Natural History,' June, 1866, "On the Identity of certain Species of Lepidoptera," I supposed that *P. caudius* might possibly be an Amazonian form of *P. argentus*. However, I have since detected a male of *P. caudius* amongst our specimens of *P. torquatus*: it differs from the *P. torquatus* of Brazil in having a broader subapical band on the front wings, and greenish instead of yellow submarginal spots on the hind wings; the outline of the wings, too, with the exception of the tails, exactly corresponds to the outline of the wings of *P. caudius*; therefore, although very closely allied, I think these two species may stand. Although the sexes in this group differ considerably in coloration, the outline of the wings is almost identical.

HESPEROCHARIS.

I have seen the type specimen of *Hesperocharis graphites*, Bates, in Mr. Salvin's collection, and I must confess that it seems to me

sufficiently distinct from my *Pieris avivolans*, P. Z. S. 1865, p. 457. n. 4, pl. xxvi. f. 4, to justify their separation as species. They may very possibly be local forms of one type; but in *avivolans* the submarginal lunulate marks of the underside are all distinct, whilst in *graphites* they form a continuous line; the orange streaks also are more defined, and the basal black spots larger and less numerous*.

ANTHOCHARIS.

My *A. leo* is only a variety of *A. halimede*, ♂, Klug.

ANTHOCHARIS HALIMEDE.

Anthocharis halimede, Klug, Ehrenb. Symb. Phys. Ins. (1-5) 10. t. 7. f. 12-15, ♂, ♀.

Var. ♂. *Anthocharis leo*, Butler, Ann. & Mag. Nat. Hist. December (1865).

Hab. Arabia Felix (*Klug*); White Nile (*Butler*). B.M.

RHODOCERA.

I feel satisfied that my *Gonepteryx urania* can be nothing more than Mr. E. Doubleday's *wallichii*, and may even be described from the type of that species; this species has been for years confounded with a smaller insect described last year by Mr. F. Moore in the 'Proceedings' of the Society.

RHODOCERA WALLICHII.

Gonepteryx wallichii, E. Doubleday, Trans. Ent. Soc. Lond. t. 5, Proc. p. 47 (1848).

Gonepteryx urania (wallichii?), Butler, P. Z. S. 1865, p. 458, pl. xxvi. f. 5.

Hab. North India. B.M.

EUPLŒA.

The following species are omitted in my 'Monograph,' *antea*, p. 268:—

EUPLŒA KADU.

♂. *Euplœa kadu*, Eschscholtz, Kotzeb. Reise, p. 210. n. 15, pl. 6. figs. 15a, 15b (1821).

Hab. Guam.

This may be identical with the *eunice* of Boisduval (Sp. Gén. Lép. pl. 24. f. 1), and probably the male of *E. hewitsonii*.

EUPLŒA NOVARÆ.

Euplœa novaræ, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 482. n. 108 (1863).

Hab. Nicobar.

Allied to *E. eunice*, Godt.; should come, according to Dr. Felder, next to his *E. ledereri*.

* Mr. Salvin does not consider these insects to be distinct species.

EUPLŒA ESPERI (*E. crameri*, Lucas, local var.).

Euplœa esperi, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 482. n. 109 (1863).

Hab. Nicobar Islands.

The former of these may be identical with some species in the National Collection; but I cannot find anything to suit the description to my satisfaction.

E. crassa may be a local form of *E. klugii*, Moore.

EUPLŒA SCHERZERI.

Euplœa scherzeri, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 479. n. 88 (1863).

Hab. Ceylon.

Dr. Felder describes this insect as being, at first sight, like *E. climena* of Cramer, but larger; underneath like *E. melina* of Godart, but with two discal streaks. It may be my *E. picina*; but the localities are different; and as no figure is given, it is impossible to be sure of the identity of the two insects.

EUPLŒA FRAUENFELDI (*E. crameri*, Lucas, local form).

Euplœa frauenfeldi, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 479. n. 87 (1863).

Hab. Ceylon.

Very near *E. bremeri*, Felder.

E. felderi may be a local form of *E. kinbergi*, Wallengren.

EUPLŒA ADYTE.

Euplœa adyte, Boisduval, Bull. Ent. p. clvi. n. 8 (1859).

Hab. New Caledonia.

Must be placed next to *E. eleusine*, Cramer. Dr. Boisduval seems to consider the locality of *E. eleusine* to be Amboyna; we have several specimens of it from Java, but none from that locality.

Cramer's figure is certainly meant to represent the insect subsequently figured by Hübner, and not the ♂ *mniszechii* of Felder. Judging by the description, I should think *E. adyte* must more nearly approach *E. eleusine* than *E. saundersii* (*tulliolus*, var.).

E. latifica is probably only the *E. dufresnii* of Godart.

E. corinna, M'Leay (King's Survey of Australia, ii. App. p. 462 (1827)), is most likely only a local variety of *E. core*.

EUPLŒA HELCITA (*E. eleutho*, var.?).

Euplœa helcita, Boisduval, Bull. Ent. p. clvi. n. 7 (1859).

Hab. New Caledonia.

I do not think this can be more than a local variety of *E. eleutho*; I have regarded it as such in my 'Monograph.' *E. eleutho* varies very much in form, and in the shape and position of the spots upon the wings, in specimens from the same locality; and therefore it is but natural to suppose that some more definite alteration in the size and position of the spots would occur in a different habitat.

DANAIS.

Danais xanthippus should in my 'Monograph' have been placed after *D. eresimus*, to which it is closely allied.

Since sinking Mr. Bates's species *D. jamaicensis* into a synonym I have seen more specimens of that insect; and it appears to be about as constant as any of the allied forms. Unless the line be drawn somewhere, the whole of the species of *Danais* from *berenice* to *cleophile* might be considered one species, the difference between one form and another being generally almost imperceptible. Thus specimens of *D. berenice* from the north-western coast of America only differ from *D. strigosa* (Bates) in being slightly larger and duller in colouring, and with the nervures not margined with grey; dark specimens of *D. jamaicensis* cannot conscientiously be separated from *D. strigosa*, and only differ from *D. gilippus* in having no central white spots and the nervures margined with grey. *D. gilippus* differs from *D. eresimus* in having several additional white spots and a wider submarginal black border; *D. eresimus* has several white spots more than *D. cleothera*, which it otherwise entirely resembles; *D. cleothera* scarcely differs from the Brazilian form of *D. erippus*; and the small Venezuelan form of *D. erippus* only differs from *D. cleophile* in having a narrower marginal border, and the subapical spots of the front wings pale ferruginous instead of yellow and placed a little closer together. Considering these facts, it would perhaps be as well to regard *D. strigosa* and *D. jamaicensis* as distinct from the other allied forms.

DANAIS MANUJA.

Idea manuja, Eschscholtz, in Kotzebue's Reise um die Welt, pl. 7. f. 13 a, 13 b (1821).

Hab. Brazil.

Omitted in my paper; probably only another form of *D. gilippus*. It seems chiefly to differ in its greater expanse of wing and larger white spots; it should come after *D. gilippus*, Cramer. This species is not noticed in Mr. Doubleday's 'Genera of Diurnal Lepidoptera.'

Idea plexippus, Eschscholtz, in Kotzebue's Reise um die Welt, pl. 7. f. 14 a, 14 b (1821), synonym of *D. erippus*: also omitted in the 'Genera.'

DANAIS CRATIPPUS (*D. chrysippus*, local var.).

Danais cratippus, Felder, Sitzungsberichte der K. Akademie der Wissenschaften zu Wien, p. 449 (1860).

Hab. Amboyna.

A very slight local variety of *chrysippus*, the dark form mentioned in my 'Monograph' as from Ceram, Java, and Greece.

My *D. pullata* proves to be identical with Felder's *D. mitylene*.

DANAIS MITYLENE.

Danais mitylene, Felder, Wien. ent. Monatschr. iv. p. 232. n. 78 (1860).

Danaïs pullata, Butler, P. Z. S. 1866, p. 47.

Hab. Oceania.

B.M.

DANAIS ABIGAR.

Idea abigar, Eschscholtz in Kotzebue's Reise um die Welt, pl. 7. f. 12 a, 12 b (1821).

Hab. Manilla (*Coll. Hewitson?*).

This species is not mentioned in the 'Genera.' It must be placed after *D. fulgurata*. In some respects it resembles *D. affinis*, Fabricius, in others *D. melanippus*, Cramer.

DANAIS NESIPPUS (*D. hegesippus*, var. ? B.M.).

Danaïs nesippus, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 486. n. 123 (1863).

Hab. Sambelong.

This is omitted in my 'Monograph' of the genus. It seems to me to be an intermediate form between *D. hegesippus* and *D. conspicua*; but as far as I can judge from the description, it appears not to be identical with the latter insect. Dr. Felder considers it to be "a local variety of *D. hegesippus* and *D. melanippus* of Cramer, and a local subspecies of *D. lotis*." I do not pretend to understand such a term as "local subspecies;" but perhaps some people may be found to appreciate the meaning of it.

D. nesippus should be placed after *D. conspicua*.

D. similis, var. *chinensis*, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 486 (1863).

Hab. Hong Kong.

Probably the true *similis* of Linnæus.

The following species was inserted in the manuscript of my paper; but by some accident the page was lost:—

DANAIS JUVENTA.

Papilio juvena, Cramer, Pap. Exot. ii. t. 188. f. B (1779).

Danaïs juvena, Godart, Enc. Méth. ix. p. 193 (1819); E. Doubl. List Lep. Brit. Mus. pt. i. p. 50 (1844); Westw., Doubl. & Hewits. Gen. Diurn. Lepid. p. 93. n. 34 (1847); F. Moore, Cat. Lep. Mus. East Ind. Comp. p. 122. n. 240 (1857).

Hestia juvena, Hübner, Verz. bek. Schmett. p. 15 (1816).

Hab. Java; Borneo; Lombok; Philipppines; Celebes. B.M.

The position of this species is after *D. meganira* (Godart).

DANAIS CEYLANICA (*D. aglea*, var.).

Danaïs ceylanica, Felder, Cat. Nov. Voy., Verhandl. zool.-botan. Vereins in Wien, xii. p. 479. n. 90 (1863).

Hab. Ceylon.

B.M.

Having now seen Mr. Hewitson's *Danaidæ*, I have become aware of the fact that the *phyle* of Felder is the insect described and figured in the 'Proceedings' as *D. erebus*. It would have been quite impossible for me to have discovered this without either seeing the insect

itself or a figure of it; for descriptions of these closely allied forms differ so little from one another that distinctions of outline or pattern can scarcely be appreciated.

DANAIS PHYLE.

Danais phyle, Felder, Wien. ent. Monatschr. p. 105. n. 65 (1863).

Danais erebus, Butler, P. Z. S. 1866, p. 54,

Hab. Philippine Islands.

B.M.

I have lately seen specimens of *D. vitrina*, Felder, in Mr. Bates's and Mr. Hewitson's collections; and it seems to me to differ from my *D. ænone* (P. Z. S. 1865, p. 433, pl. xxv. f. 6, 1866, p. 56) in being larger and with fewer marginal spots; there can, however, be no doubt that it is the same species with mine.

Euplœa philomela of Zinken-Sommer, hitherto placed as a synonym of *D. cleona* of Cramer, must be kept separate from it. This species, excepting in form, bears a more general resemblance to my *D. crocea*; it is intermediate between the two species; and the male, two specimens of which I have discovered in the Museum Collection, is of the same form as my *D. gloriola*, ♂. It may be easily distinguished from *D. crocea*, not only by its different form, but by the male having the entire basal portion of the front wings yellow, and the subapical streaks much broader and shorter.

DANAIS PHILOMELA.

Euplœa philomela, ♀, Zinken-Sommer, Nova Acta Acad. Nat. Curios. xv. t. 16. f. 17 (1831).

Hab. Java; Nepaul.

♂, B.M.

The two next are identical:—

DANAIS PUMILA.

Danais pumila, Boisduval in Ann. Soc. Ent. France, p. 156 (1859).

Danais mariana, Butler, Ann. & Mag. Nat. Hist. xvi. p. 397 (1865); P. Z. S. 1866, p. 58, Pl. IV. f. 7.

Hab. New Caledonia.

B.M.

The following also prove to be synonymous:—

DANAIS CHLORIS.

Danais chloris, Felder, Wien. ent. Monats. p. 300. n. 11 (1861); Butler, P. Z. S. 1866, p. 58.

Danais salvini (*chloris*, Felder?), Butler, P. Z. S. 1866, p. 172 (♀ fig.).

Hab. Celebes.

♀, B.M.

VICTORINA.

By comparison of the types I find that my *Victorina aphrodite*, P. Z. S. 1865, p. 483, is identical with Mr. Bates's *Amphirene superba*, Ent. Month. Mag. (1864); yet, judging from the description alone, I had concluded that they must be distinct. This shows how necessary

figures are for the determination of species of Lepidoptera, even when the insects are carefully described.

VICTORINA SUPERBA.

Amphirene superba, Bates, Ent. Month. Mag., List Butterfl. Guatem. & Panam. (1864).

Victorina aphrodite, Butler, P. Z. S. 1865, p. 483.

Hab. Polochic Valley, Guatemala; Mexico.

B.M.

The Mexican form which I described is somewhat longer and narrower in the wings than the one described by Mr. Bates. We now have specimens of both insects in the Museum Collection.

CHARAXES.

The following alterations should be made in my monograph of this genus (P. Z. S. 1865, p. 422 *et seq.*):—

Charaxes euryalus and *C. latona* should come after *C. affinis*, *C. latona* being included in the same division with *C. affinis* and its allies, as it is evidently the female of an insect belonging to that group.

Charaxes jahlusa (Trimen) and *C. argynnides* (Westwood), p. 637. n. 59, must, I think, be separated as distinct species; I have lately seen specimens of two species, probably typical of these forms, in Mr. Bates's collection.

According to M. Lucas, the *Nymphalis pleione* of Godart, which in the 'Genera of Diurnal Lepidoptera' is placed in the genus *Paphia*, should properly belong to *Charaxes*, where it would come near *C. horatius*, the *anticlea* of Drury.

M. Lucas has examined the type specimen described by Godart; he considers that the proper locality of the insect should be the coast of Africa, and not the Antilles as stated in the 'Encyclopédie Méthodique.' The synonymy of this species therefore will stand as follows:—

CHARAXES PLEIONE.

Nymphalis pleione, Godart, Enc. Méth. ix. p. 366. n. 56 (1819).

Paphia pleione, Westw., Doubl. & Hewits. Gen. Diurn. Lepid. p. 319. n. 23 (1850).

Charaxes pleione, Lucas, Bull. Soc. Ent. de France, p. xx (1861).

Hab. Antilles (Godart); coast of Africa (Lucas).

CHARAXES FABIUS. (Synonym of)

Papilio euphanes, Esper, Ausl. Schmett. i. pl. 59. f. 1 (1801).

C. GALAXIA of my 'Monograph' has been supposed by some to be a mere variety of *C. pyrrhus*; but having lately seen a specimen of the true *pyrrhus* in the collection of Mr. Bates, I am enabled to say distinctly that the two insects are vastly different, *C. pyrrhus* having been very well represented by Clerck, Cramer, and others. The specimen in Mr. Bates's collection is from Amboyua.

PROC. ZOOL. SOC.—1866, No. XXX.

BRAHMÆA.

By the kind assistance of Mr. Frederic Moore I have discovered that my *Brahmæa petiveri* is identical with *B. lunulata* of Bremer, figured in the third part of Ménétriés's catalogue, the habitat of that insect being stated as North China. *B. whitei* I believe goes under the name of *hearseyana*, which I imagine must have been the name intended for it by Mr. Adam White, the specimen which he figured having been brought over by General Hearsey.

BRAHMÆA LUNULATA.

Brahmæa lunulata, Bremer, Etud. Ent. de Motschulsky, p. 64 (1852); Ménétriés, Reis. und Forsch. in Amur-Lande, Bd. ii. p. 55. n. 134 (1859); Cat. Lepid. Mus. imp. Petrop. iii. pl. 15. f. 5.

Brahmæa petiveri, Butler, P. Z. S. 1866, p. 120.

Saturnia undulata, Bremer, Beitr. zur Schmett.-Fauna des Nördl. China's, p. 16. n. 78 (1853).

Hab. Isle of Chusan (*Petiver*); North China (*Bremer, Ménétriés*).

13. A Monograph of the Genus *Euptychia*, a numerous race of Butterflies belonging to the Family *Satyridæ*; with Descriptions of Sixty Species new to Science, and Notes on their Affinities &c. By ARTHUR GARDINER BUTLER, F.Z.S., Assistant, Zoological Department, British Museum.

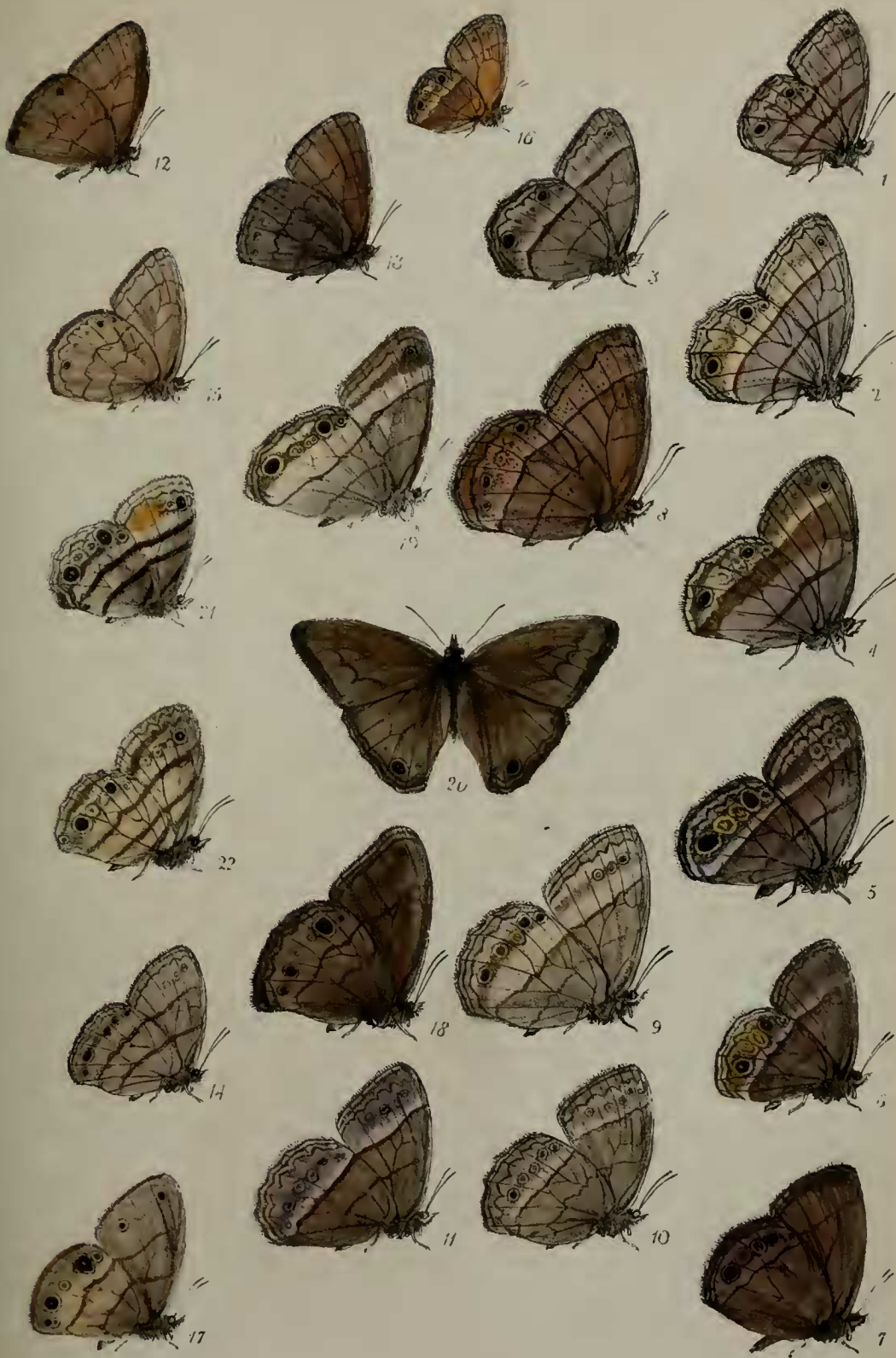
(Plates XXXIX., XL.)

The very numerous genus which I have now taken in hand has for some years remained comparatively untouched by entomologists. The species are confined exclusively to the New World, the majority of them being natives of South America. They are generally rather sober in colouring; but some species are exceedingly brilliant, and often varied on the underside with silvery spots and streaks which appear embossed, as though molten metal had been dropped upon the wings.

Euptychia is closely allied to several other Satyride genera, from some of which it seems scarcely to differ except in colouring or locality. Professor Westwood, in the 'Genera of Diurnal Lepidoptera,' has separated it under two names, *Neonympha* and *Euptychia*, following the example set by Hübner in his 'Verzeichniss der bekannten Schmetterlinge;' but most entomologists now agree that the two genera are synonymous. In the 'Genera,' although great trouble has been taken in dividing them, several species are placed under both heads.

In the present paper I have placed the insects as nearly as possible in natural consecutive order, and divided them under sections, to render their determination less difficult.

This Monograph includes all the species in the National Collection,







A. BUTLER LITH

MAN HANSHAW LITH

NEW SPECIES OF EUPTYCHIA



of which more than forty are new to science—besides three new species in the collection of Mr. Osbert Salvin, and fifteen in that of Mr. H. W. Bates. Mr. Hewitson has also kindly lent me several typical specimens, and has given me permission to describe his new species, which I intend to do as soon as possible in a supplementary paper.

Some two or three of the new species here described may prove to be only varieties of insects described by Godart; but I have strictly followed out each of his descriptions with every new species before describing it; so that any error of this nature must be attributed to the absence of figures of his insects.

Genus EUPTYCHIA, Hübner.

Euptychia, *Neonympha*, and *Megisto*, Hübner, Verz.

Euptychia, *Neonympha*, and *Cissia*, E. Doubleday, List Lep. Brit. Mus.

Euptychia and *Neonympha*, Westw. & Hewits. Gen. Diurn. Lepid.

Oreades strigata, Hübner, olim.

Satyrus, Godart, Enc. Méth.

Division I.

Alæ supra fuscae, rarissime albo violaceove variae; posticæ plerumque ocello subanali distincto: subtus pallidiores, ocellis forma regularibus, plerumque distinctis, lineis duabus mediis, interna anticarum raro obsoleta.

1. EUPTYCHIA OCIRRHÖE.

Papilio ocirrhoë, Fabricius, Gen. Ins. p. 260 (1776); Ent. Syst. iii. pt. 1. p. 96. n. 297 (1793).

Euptychia ocirrhoë, Westw. & Hewits. Gen. Diurn. Lep. p. 373. n. 1 (1851).

Satyrus ocyrrhoë, Godart, Enc. Méth. ix. pp. 464 & 489. n. 41 (1819).

Oreas (strigata) ocyrrhoe, Hübner, Samml. exot. Schmett. Bd. i. pl. 85. f. 1-4 (1806).

Papilio hesione, Sulzer, Gesch. der Inseckt. t. 17. f. 3, 4, p. 144 (1776).

Papilio cissia, Cramer, Pap. Exot. iii. p. 3, pl. 194. f. D, E (1782).

Euptychia cissia, E. Doubl. List Lep. Brit. Mus. p. 122 (1844).

Hab. Panama; Brazil; Honduras; Caraccas. B.M.

1 a. EUPTYCHIA OCIRRHÖE, var. (sp. n. ??).

Alæ magis productæ, linea submarginali anticarum subintegra, area basali fuscescente, fasciisque angustis.

Hab. Polochic Valley, Guatemala (Coll. Salvin).

Alæ basi subtus solum fuscescente.

Hab. Obydos (Coll. Bates); Panama.

B.M.

Unless I had seen intermediate varieties, I should have been in-

clined to consider this form a distinct species, the appearance of the underside being so unlike that of *ocirrhoë* proper that it would be impossible to place the two insects under one name without such proofs of their apparently specific identity. Even now I am not sure that the two insects might not be separated, as this form differs even from those most closely allied to it in having the front wings more produced, and the submarginal line of the front wings entire to near the apex.

2. EUPTYCHIA LYDIA. (*E. ocirrhoë*, ♀?)

Papilio lydia, Cramer, Pap. Exot. ii. pl. 148. f. C, D (1779) (but not of Fabricius, Ent. Syst. iii. pt. 1. p. 135).

Euptychia lydia, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 2 (1851).

Satyrus lydius, Godart, Enc. Méth. ix. pp. 464 & 489. n. 40 (1819).

Hab. Surinam.

The representation of this species may be intended for the female of *E. ocirrhoë*; but it is impossible to decide whether it is so or not; and until we know more of the Lepidoptera of Surinam, this and many other Butterflies figured by Cramer must be considered distinct species.

3. EUPTYCHIA OCYPETE.

Papilio ocypete, Fabricius, Gen. Ins. Mant. 260 (1776); Ent. Syst. iii. pt. 1. p. 96. n. 296 (1793).

Euptychia ocypete, Hübner, Verz. bek. Schmett. p. 54. n. 506 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 10 (1851).

Satyrus ocypete, Godart, Enc. Méth. ix. pp. 463 & 488. n. 34 (1819).

Hab. Surinam.

Var. *Alæ supra paulo glaucæ; posticæ macula anali nigra fusco pallido cincta.*

Hab. Venezuela; Para; Tapajos (*Coll. Bates*). B.M.

This species is not perfectly identical with *E. helle* of Cramer; although Fabricius refers to Cramer's figure of that insect, his description does not in all points agree with it.

4. EUPTYCHIA HELLE.

Papilio helle, Cramer, Pap. Exot. iii. pl. 194. f. F, G (1782).

Papilio ocypete (synonym), Fabricius, Ent. Syst. iii. pt. 1. p. 96. n. 296 (1793).

Euptychia ocypete (synonym), Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 10 (1851).

Hab. Surinam.

Var. *Alæ posticæ supra macula anali distincta bipupillata et ochreo cincta.*

Hab. Para. B.M.

This species differs from *ocypete* in being longer in the wings and not so distinctly glaucous, in having the anal ocellus above distinctly bipupillated, the bands of the underside broader and becoming reddish at the anal angle of the hind wings, and also in having three apical ocelli instead of two in the front wings; this last, however, is a variable character in *E. ocypete*.

5. EUPTYCHIA MYNCEA.

Papilio myncea, Cramer, Pap. Exot. iv. pl. 293. f. C (1782).

Euptychia myncea, Hübner, Verz. bek. Schmett. p. 54. n. 516 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 5 (1851).

Satyrus myncea, Godart, Enc. Méth. ix. pp. 463 & 488. n. 36 (1819).

Neonympha clerica, Herrich-Schäffer, Lep. Ind. Syst. (1864).

Hab. Guiana (*Westw.*); Brazil. B.M.

Var. *a.* *Posticæ supra macula anali minus distincta; anticæ subtus macula postica flava distinctiore, posticæ ocellis minoribus.*

Hab. Para. B.M.

This variety of *myncea* has hitherto stood in the National Collection under the name of *crantor* of Fabricius—a species which, if the figure of Donovan be correct, it is wholly unlike, and which we do not possess.

Var. *b.* *Alæ subtus cinerascens.*

Hab. Para (*Coll. Bates*).

Var. *c.* *Alæ subtus fasciis rufescentibus; anticæ macula flava valde distincta; posticæ margine postico latiore intusque fulvo marginato, ocellis mediis parvis.*

Hab. Honduras. B.M.

This has also been considered a variety of *C. crantor* (*vide* Gen. Diurn. Lepid. p. 373. n. 7, localities). Fabricius's description does not, however, suit either of these forms; he describes the underside as having two ocelli in the front wings. Both of these varieties have three apical ocelli, the highest of which is the only pupillated one, the other two being merely silvery spots with indistinct dusky irides.

6. EUPTYCHIA PALLADIA, sp. n. (Pl. XXXIX. fig. 21.)

Alæ supra fuscæ, fasciis duabus apud basim (interna indistincta) obliquis integris; margine postico, linea marginali aliaque submarginali undulata fuscis; margine anali posticarum albicante: anticæ ocello apicali, posticæ uno anali, nigris flavo cinctis et argenteo bipupillatis: corpus cinereo-fuscum, antennis pallidis rufo-fuscis.

Alæ subtus albidæ, fasciis duabus mediis, posticarum minime convexis; lineis duabus marginalibus aliaque submarginali undulatis fuscis, externa anticarum integra, interna angulis alternis, lineis internis ad angulum analem posticarum latioribus flavescentibusque: anticæ ocellis tribus ochreo cinctis et fusco circumcinctis subapicalibus, maculisque duabus insuper parvis piriformibus

ochreis, fusco cinctis; ocello primo magno nigro, argenteo bipupillato, aliis fuscis argenteo bipupillatis; macula permagna subanali flava: posticæ ocellis quinque unoque anali minimo, ochreo cinctis, fusco circumcinctis et argenteo bipupillatis, primo, secundo, quinto et anali nigris, primo parvo, secundo et quinto magnis, aliis fuscis: corpus albido-cinereum.

Exp. alar. unc. $1\frac{7}{16}$.

Hab. Tapajos (*Coll. Bates*).

This insect is not closely allied to any other known species; in general coloration it most nearly resembles the Honduras form of *E. myncea*, but differs from it in many particulars.

7. EUPTYCHIA TERRESTRIS, sp. n. (Pl. XXXIX. fig. 1.)

Alæ supra fuscae, fasciis duabus mediis obliquis, linea una submarginali undata duabusque marginalibus directis nigro-fuscis; posticæ macula anali parva argentea brunneo cincta.

Alæ subtus pallidiores, fasciis mediis fuscis rufescentibus; lineis marginalibus velut supra fuscis; anticæ ocello apicali consueto maculisque duabus argenteis; posticæ maculis quinque ocellatis, primo secundo quintoque nigris ochreo cinctis argenteoque bipupillatis, tertio quartoque argenteis ochreo cinctis, ocellis omnibus fascia lata indistincta submarginali inclusis.

Exp. alar. unc. $1\frac{7}{16}$.

Hab. Para.

B.M.

Var. Ocellis nigris majoribus.

Hab. Lower Amazons (*Coll. Bates*).

Underside uniform greyish brown; central ocelli of hind wings large and oval; otherwise very similar to *E. myncea*, but smaller.

8. EUPTYCHIA CLARISSA.

Papilio clarissa, Cramer, Pap. Exot. iv. pl. 293. f. D, E (1782).

Euptychia clarissa, Hübner, Verz. bek. Schmett. p. 54. n. 503 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 6 (1851).

Papilio penelope, Fabricius, Ent. Syst. iii. pt. 1. p. 96. n. 298 (1793); Godart, Enc. Méth. ix. pp. 463 & 496. n. 39 (1819).

Hab. Guiana (*Westw.*); Para.

B.M.

This species may readily be distinguished from *E. myncea* by the distinct apical ocellus in the front wings above; below by the brilliance and number of the silver spots, which are almost destitute of iris, the pale hind marginal edge, and doubly dentated submarginal lines.

9. EUPTYCHIA CAMERTA.

Papilio camerta, Cramer, Pap. Exot. iv. pl. 293. f. F (1782).

Neonympha camerta, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 3 (1851).

Hab. Guiana, Brazil (*Westw.*); Surinam (*Cramer*).

This species, although closely allied to several acknowledged *Euptychiæ*, has been placed in the genus *Neonympha*. It appears

to me that if questionable microscopical distinctions are to be the means of widely separating species which are evidently related to one another, it would be much better not to pay attention to them.

10. EUPTYCHIA THEMIS, sp. n.

In the collection of Mr. Hewitson.

11. EUPTYCHIA USITATA, sp. n. (Pl. XXXIX. fig. 2.)

Alæ supra fuscae linea media fuscescente continua post cellas posita, tribusque marginalibus undatis; anticæ ocello apicali parvo nigro, flavo cincto et albo bipupillato; posticæ ocellis duobus similibus analibus, interno majore.

Alæ subtus pallidiores, lineis duabus mediis fuscis distinctis lituraque ad cellæ extimum, area apicali pallida ad apicem anticarum fuscescente, lineis marginalibus velut supra distinctioribus; anticæ ocello apicali consueto punctisque minimis argenteis, macula magna subanali indistincta; posticæ ocellis velut in E. myncea, minoribus.

Exp. alar. unc. 1½.

Hab. Venezuela.

B.M.

Var. a. Anticæ subtus immaculatæ, posticæ ocellis minus distinctis.

Hab. Venezuela.

B.M.

Var. b. Lineis mediis subtus rufescentibus.

Hab. Polochic Valley, Guatemala (*Coll. Salvin*).

12. EUPTYCHIA SIMILIS, sp. n.

Alæ supra fuscae; posticæ lineis tribus marginalibus fuscescentibus, media latiore, ocello uno subanali nigro ochreo cincto cæruleoque pupillato: corpus fuscescens.

Alæ subtus pallidiores cinereo varicæ, lineis mediis velut in E. usitata; area apicali cinerascens lineis tribus tenuissimis marginalibus undatis, media ad angulum analem posticarum dilatata; fascia submarginali lata ochreo-fusca; posticæ macula subanali nigra ochreo cincta, punctisque tribus submarginalibus fuscis: corpus pallidum; antennis supra fuscis nigro acuminatis, subtus pallidioribus rubro nigroque acuminatis.

Exp. alar. unc. 1⅙.

Hab. Guatemala (central valleys) (*Coll. Salvin*).

Allied to the preceding species, but very distinct.

Var. Alæ subtus pallidiores nec cinerascens, lineis marginalibus margini propioribus, anticæ ocellis tribus fuscis pallidis valde indistinctis, posticæ ocellis quinque majoribus (secundo et quinto maximis) nigris.

Hab. Nicaragua.

B.M.

13. EUPTYCHIA PIERIA, sp. n. (Pl. XXXIX. fig. 3.)

Alæ supra olivaceo-fuscae; anticæ puncto subapicali, lineis tribus

marginalibus mediisque valde indistinctis fuscis; posticæ linea media paulo distinctiore et apud angulum analem subangulata, ocello subanali nigro flavo cincto et albo bipupillato, lineis tribus marginalibus distinctis undatis fuscis: corpus cinereum.

Alæ pallidiores, lineis duobus late separatis et margini subparallelis, externa paulo latiore ad costam anticarum incurrente, apud angulum analem posticarum subangulata; lineis tribus submarginalibus fuscis, interna anticarum sinuata, posticarum sinuata et dentata, aliis anticarum subintegris, posticarum sinuatis: anticæ puncto subapicali parvo, nigro, ochreo pallido cincto argenteoque pupillato; posticæ ocellis quinque ochreo pallido cinctis, tertio et quarto argenteo sparsis, aliis nigris argenteo bipupillatis, puncto subanali ochreo: corpus pallidum.

Exp. alar. unc. $1\frac{3}{8}$.

Hab. Honduras.

B.M.

Allied to the preceding species.

14. EUPTYCHIA AUSTERA, sp. n. (Pl. XXXIX. fig. 4.)

Alæ supra olivaceo-fuscæ; anticæ ocello anali nigro argenteo bipunctato fulvoque cincto; posticæ paulo sinuatae, ocellis duobus subanalibus analique majore, similibus, fascia indistincta media arcuata fusca, puncto unali, duobus apud apicem valde indistinctis fuscisque marginali ochreo-fuscis, ciliis fuscis: corpus paulo obscurius.

Alæ subtus cinerascens, fascia subcontinua cellarum media oblique transerrante aliisque latiore obliqua post cellas posita ochreo-fuscis; anticæ linea submarginali ochrea fasciam adjacentem, ocello velut supra, lineisque tribus marginalibus, interna dentata; posticæ maculis quinque, prima tertia et quarta indistinctis argenteis ochreo cinctis, secunda et quinta ocellatis, fascia tenui marginali ochrea aliisque interna fusca, ciliis velut supra fuscis: corpus cinereum, antennis fuscis, subtus rufescentibus.

Exp. alar. unc. $1\frac{6}{8}$.

Hab. Bogota.

B.M.

15. EUPTYCHIA DIVERGENS, sp. n. (Pl. XL. fig. X.)

Alæ supra olivaceo-fuscæ, lineis tribus marginalibus fuscis; anticæ costa basali ochracea; posticæ linea media obliqua indistincta ocelloque subanali indistincto: corpus olivaceo-fuscum.

Alæ subtus pallidiores, margine postico ochreo, lineis tribus marginalibus nigro-fuscis fasciisque submarginali ochracea, fasciis duobus mediis subferrugineis, apicibus divergentibus; anticæ ocello apicali, fasciis mediis latius separatis; posticæ ocellis quinque submarginalibus, secundo et quinto majoribus nigris argenteo bipupillatis fulvoque cinctis, aliis argenteis fulvo cinctis, fasciis mediis plus approximantibus, externa medio paulo angulata: corpus olivaceo-fuscum.

Exp. alar. unc. $1\frac{5}{8}$.

Hab. Rio Negro (Colls. Salvin and Bates).

This insect is something like a very small specimen of *E. antinoë*.

16. EUPTYCHIA EURYTUS.

Papilio eurytus, Fabricius, Syst. Ent. p. 487. n. 194 (1775-78).

Papilio eurytris, Fabricius, Ent. Syst. iii. pt. 1. p. 157. n. 485 (1793).

Neonympha eurytris, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 1 (1851).

Satyrus eurythris, Godart, Enc. Méth. ix. pp. 465 & 495. n. 57 (1819); Boisduval et Leconte, Hist. Léop. Am. Sept. pl. 61 (1833).

Papilio cymela, Cramer, Pap. Exot. pl. 132. f. C, D (1779).

Megisto cymelia, Hübner, Verz. bek. Schmett. p. 54. n. 517 (1816).

Hab. United States.

B.M.

17. EUPTYCHIA PERIPHAS.

Satyrus periphias, Godart, Enc. Méth. ix. pp. 465 & 495. n. 62 (1819).

Neonympha periphias, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 5 (1851).

"*Alis integerrimis, fuscis, supra ocello unico, subtus striga ferruginea; posticis ocellis tribus punctisque quatuor interjectis.*"

"It differs from *eurythris* in being smaller, the upperside and the underside of the front wings having only a single ocellus, and the underside of the hind wings only three ocelli—one near the margin, and two (the outer one very small) near the anal angle,—finally in that it only has one brown line, instead of two, in the middle of the disk of each wing."—Enc. Méth.

Hab. Brazil (*Coll. Hewitson*).

18. EUPTYCHIA LETHE, sp. n.

♂. *Alæ supra fuscae, linea marginali alteraque submarginali indistinctis obscurioribus subintegris; posticæ ocello subanali nigro brunneo cincto, linea media discali undulata indistincta: corpus nigro-fuscum, antennis nigro-fuscis.*

Alæ subtus paulo pallidiores, area apicali pallescente, lineis duabus mediis valde separatis fuscis, interna angulata, externa undulata, lineis marginalibus velut supra distinctioribus; anticæ ocellis duobus nigris flavo cinctis et albo pupillatis, uno subapicali, alioque subanali majore; posticæ ocellis quatuor, uno apicali, duobus analibus minimis unoque subanali maximo nigris flavo cinctis et albo pupillatis, punctis duobus ocellatis inter ocellos apicalem et anales positis indistinctis fuscis: corpus nigro-fuscum.

Exp. alar. unc. 1 $\frac{5}{8}$.

Hab. Venezuela.

B.M.

19. EUPTYCHIA MÆPIUS.

Satyrus mæpius, Godart, Enc. Méth. ix. pp. 464 & 490. n. 45 (1819).

Euptychia mæpius, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 21 (1851).

"*Alis integris, fuscis: subtus strigis tribus ferrugineis dimidioque apicali grisescente; posticis ocellis quinque bipupillatis, 2°, 4°, 5° supra conspicuis.*

"About $1\frac{1}{2}$ inch in expanse. The upperside of the wings dark brown.

"The underside is of a pale shade, nearly of the same brown from the base to the middle, with two ferruginous transverse lines; becoming greyish towards the apex, with a row of four ocelli in the front wings, and a row of five in the hind wings, the second, fourth, and anal ones visible above; these ocelli, which are bounded in front by a ferruginous waved line and a double blackish line, are very dark, with yellowish iris and double silver pupil; of those in the front wings only two (the first and last) are visible above."—*Enc. Méth.*

Hab. Guiana.

Var. *Alæ supra ocellis primo et quarto indistinctissimis, microscopio solum manifestis.*

Alar. exp. unc. $1\frac{3}{4}$.

Hab. Para.

B.M.

If measured as it is when set, this insect would only expand $1\frac{1}{2}$ inch; but taking each wing separately the expanse is $1\frac{3}{4}$ inch. This fact perhaps may account for many errors into which authors have fallen with regard to the measurement of Lepidoptera.

20. EUPTYCHIA ERIGONE, sp. n. (*E. mæpius*, var. ?) (Pl. XXXIX. fig. 5.)

Alæ supra olivaceo-fuscae, linea media obliqua fusca post cellam posita; anticæ lineis tribus marginalibus indistinctis fuscis; posticæ lineis tribus distinctioribus, interna apud apicem angulata, ocellis quinque submarginalibus nigris ochreo cinctis, secundo obsoleto, quarto magno cæruleo pupillato, quinto minimo argenteo pupillato.

Alæ subtus pallidiores, lineis duabus mediis apud angulum analem posticarum angulatis, lineis tribus marginalibus fuscis, interna undulata; anticæ area apicali ochreo-fusca, fascia lata media fusca, ocellis tribus subapicalibus fuscis ochreo cinctis, infimo majore cæruleoque bipupillato; posticæ area apicali cinerea, fascia media lata fusca ocellisque quinque submarginalibus argenteo-cæruleo bipupillatis, primo secundo et quinto nigris flavo cinctis, aliis fuscis flavo cinctis, secundo et quinto majoribus: corpus olivaceo-fuscum, antennis fuscis.

Exp. alar. unc. $1\frac{5}{8}$.

Hab. S^{to} Paulo.

B.M.

Var, *Posticæ supra, ocellis parvis, indistinctis.*

Hab. Ega (Coll. Bates).

Allied to *E. mæpius*. It chiefly differs in the number of ocelli upon the upperside, in *E. mæpius* only three being visible in the hind and two in the front wings, in this insect none in the front and five in the hind wings, one of which is, however, very indistinct;

on the underside it differs in the number of ocelli in the front wings, *E. mæpius* having four instead of three.

21. EUPTYCHIA ARGYROSPILA, sp. n.

Alæ supra fuscæ; anticæ lineis duabus marginalibus obscurioribus, interna undulata, margine ipso nigro-fusco, ciliis fuscis puncto apud angulum analem nigro minimo; posticæ ocellis tribus subanalibus nigris ochreo cinctis, medio magno distincto, violaceo pupillato: corpus fuscum, antennis fuscis.

Alæ subtus ochreo-fuscæ, lineis duabus mediis obscurioribus, externa posticarum medio indentata; margine postico, linea marginali alteraque submarginali nigris, posticarum undatis, interna anticarum angulis alternis undulata; anticæ ocellis quatuor fulvo cinctis, primo et quarto minoribus nigris, primo argenteo bipupillato, secundo et tertio fuscis violaceo pupillatis; posticæ ocellis quinque fulvo cinctis, apicali minimo, primo secundo et quinto nigris, aliis fuscis, quinto argenteo bipupillato, aliis violaceo pupillatis: corpus pallidius.

Exp. alar. unc. $1\frac{9}{16}$.

Hab. Ega (Coll. Bates).

22. EUPTYCHIA CRANTOR.

Papilio crantor, Fabricius, Ent. Syst. iii. pt. 1. p. 158. n. 489 (1793); Donovan, Insects of India, pl. 37. f. 4 (1800).

Satyrus crantor, Godart, Enc. Méth. ix. p. 488. n. 37 (1819).

Euptychia crantor, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 7 (1851).

Hab. —?

This species is said by Fabricius to come from India. Westwood gives the localities "Brazil, Pernambuco, Honduras." I think, however, he must have intended another species, as he quotes it as in the Museum Collection, and I have not been able to find anything like it amongst our species of *Euptychia*.

23. EUPTYCHIA OCNUS, sp. n.

Alæ supra fuscæ, margine extremo nigro; linea marginali alteraque submarginali fuscis, posticarum et interna anticarum undulatis; posticæ macula subanali nigra ochreo cincta: corpus cinereo-fuscum, antennis supra fuscis, subtus albidis præ flavescentibus et apud apicem fusco fasciolatis.

Alæ subtus pallidiores, paulo violascentes, fasciis duabus mediis rufescentibus, interna anticarum ad costam extus currente, posticarum paulo irregularibus, externa ad marginem analem angulo incurrente, margine ipso lineaque marginali nigris, posticarum undulatis, linea submarginali fusca angulis alternis undata, ciliis cinereo-fuscis; anticæ fascia submarginali fusca, ocellis tribus subapicalibus, primo nigro fulvo cincto et argenteo bipupillato, aliis minimis fuscis indistinctis argenteo pupillatis; posticæ ocellis quinque, primo secundo et quinto nigris fulvo cinctis et

argenteo bipupillatis, primo minimo, aliis fulvis linea media argentea, omnibus fusco circumcinctis: corpus pallide ochreum.

Exp. alar. unc. $1\frac{1}{6}$.

Hab. Tapajos (*Coll. Bates*); Villa Nova.

B.M.

24. EUPTYCHIA ERIPHULE, sp. n. (Pl. XXXIX. fig. 6.)

Alæ supra fuscæ, posticæ lineis tribus undatis marginalibus fuscis punctoque valde indistincto subanali fusco: corpus fuscum.

Alæ subtus pallidiores, linea tenuissima fusca apud basim posita, lineaque post medium extus violaceo marginata et ad angulum analem posticarum angulata, margine postico pallido lineis tribus marginalibus nigris; posticæ area basali paulo cinerascens, area apicali ocellis quinque submarginalibus, primo secundo et quinto nigris albo pupillatis et fulvo cinctis, tertio et quarto ovalibus argenteis fulvo cinctis, primo minimo.

Exp. alar. unc. $1\frac{7}{16}$.

Hab. Pernambuco.

B.M.

Something like a small suffused specimen of *E. myncea*, but, I think, quite distinct from that species.

25. EUPTYCHIA CELMIS.

Satyrus celmis, Godart, Enc. Méth. ix. pp. 463 & 489. n. 38 (1819).

Euptychia celmis, Westw. & Hewits. Gen. Diurn. Lepid. p. 374. n. 26 (1851).

"Alis subintegris, fuscis, subtus strigis tribus obscurioribus; posticis ocellis quinque, 2° et 3° obsoletis, 4° bipupillato majoreque.

"Nearly 2 inches in expanse. The upperside of the wings is black-brown, without spots on the front wings; a black ocellus encircled with yellow, and with a white pupil, near the anal angle of the hind wings. The underside is a little paler than the upperside, with three very obscure transverse bands; between the outer and central ones in the front wings is a small very distinct ocellus, and in the hind wings a row of five ocelli, the second and third nearly obsolete, the other three black, having a yellow iris and white pupil, the fourth and largest ocellus bipupillate. The outer margin of each wing is also bordered by a double blackish flexuous line, rather more distinct on the upperside."—*Enc. Méth.*

Hab. Brazil.

26. EUPTYCHIA ELECTRA, sp. n. (*E. celmis*, var.??) (Pl. XXXIX. fig. 7.)

♂. *Alæ supra fuscæ, posticæ lineis tribus marginalibus nigro-fuscis ocelloque subanali nigro brunneo cincto cæruleoque pupillato.*

Alæ subtus minime pallidiores, linea transversali obliqua post cellam posita tribusque marginalibus nigro-fuscis, interna apud apicem paulo undulata; posticæ lineis duabus mediis tribusque marginalibus paulo undulatis, nigro-fuscis, ocellis quinque submarginalibus cæruleo-argenteo pupillatis, apicali minimo, secundo et quinto

nigris flavo cinctis, aliis fuscis brunneo cinctis, tertio, quarto et quinto bipupillatis: corpus olivaceo-fuscum.

Exp. alar. unc. $1\frac{6}{8}$.

♀. *Alæ anticæ subtus puncto apicali fulvo ocellisque tribus subapicalibus, primo magno, aliis minoribus indistinctioribus.*

Hab. Bahia.

B.M.

At the first glance this species might almost be taken for a variety of *eriphule*; it, however, differs from that insect in coloration, marginal lining, and spotting.

27. *EUPTYCHIA VARIABILIS*, sp. n. (Pl. XXXIX. fig. 8.).

Alæ supra olivaceo-fuscae, ciliis pallidis; anticæ linea post alarum medium valde indistincta, linea submarginali paulo irregulari aliisque duabus marginalibus, fuscis; posticæ linea submarginali undulata duabusque similibus marginalibus fuscis, ocellis duobus subanalibus nigris albo pupillatis brunneoque iridatis, anali minimo, alio magno bipupillato.

Alæ subtus pallidiores; anticæ area apicali fusco sparsæ, lineis duabus mediis late separatis, interna indistincta, fuscis, aliisque marginalibus velut supra nigro-fuscis, ciliis pallidis; posticæ paulo violascentes, area basali obscuriore, olivaceo sparsa, lineis duabus mediis fuscis, externa apud medium subangulata, area apicali minus olivaceo sparsa, lineis marginalibus velut supra fuscis, ocellis sex submarginalibus ochreo cinctis, tertio obsoleto, secundo quinto et sexto nigris, aliis fuscis, primo secundo quarto et quinto bipupillatis: corpus fuscum, antennis supra fuscis, subtus flavescens.

Exp. alar. unc. $1\frac{6}{8}$.

Hab. Pernambuco; Rio Janeiro.

B.M.

Var. *Alæ subtus pallidiores; posticæ ocellis primo tertio et quarto obsoletis minimisve.*

Exp. alar. unc. $1\frac{5}{8}$ — $1\frac{13}{16}$.

Hab. Rio Janeiro.

B.M.

28. *EUPTYCHIA ANGULARIS*, sp. n.

To be described in a supplement to the genus.

Coll. Hewitson.

29. *EUPTYCHIA STRAMINEA*, sp. n.

Coll. Hewitson.

30. *EUPTYCHIA AFFINIS*, sp. n. (Pl. XXXIX. fig. 9.)

Alæ supra fuscae pallidæ; anticæ linea submarginali angulis alternis undulata duabusque marginalibus continuis fuscis indistinctis; posticæ lineis tribus marginalibus fuscis unaque ochrea undulatis, ocello subanali nigro cæruleo pupillato flavoque cincto: corpus fuscum.

Alæ subtus pallidiores, ochraceæ, lineis duabus mediis anticis, interna directa, externa de nervulo mediano primo ad costam oblique

divergente, posticis obliquis valde irregularibus et ad marginem interiorem stria terminali conjunctis, lineis tribus marginalibus fuscis, posticarum et interna anticarum angulis alternis undulata, fascia submarginali obscura; anticæ ocellis tribus subapicalibus argenteo bipupillatis, primo nigro aliisque fuscis ochreo cinctis; posticæ ocellis quinque submarginalibus ochreo cinctis et argenteo bipupillatis, primo secundo et quinto nigris, aliis fuscis: corpus ochreo-fuscum, pallidum, antennis albido fasciolatis.

Exp. alar. unc. $1\frac{5}{8}$.

Hab. Rio Janeiro; Pernambuco.

B.M.

31. EUPTYCHIA VESTIGATA, sp. n.

To be described in the supplementary paper.

In the collection of W. C. Hewitson, Esq.

32. EUPTYCHIA PIMPLA.

Neonympha pimpla, Felder, Wien. ent. Monatschr. vi. p. 177. n. 156 (1862).

“*Alis supra brunneo-fuscis, subtus brunneis cano atomatis, strigis binis discalibus, margini subparallelis, litura interjecta brevi, striga submarginali undata alteraque marginali integerrima fuscescentibus, margine ipso ante cilia fusco, anticarum ocellis quinque, posticarum sex nigris, ochraceo iridatis, argenteo pupillatis, secundo, quinto et sexto posticarum distinctioribus, ♂.*”—Felder.

Hab. Rio Negro, New Granada (*Felder*).

33. EUPTYCHIA RENATA.

Papilio renata, Cramer, Pap. Exot. iv. pl. 326. f. A (1782).

Neonympha renata, Herrich-Schäffer, Lep. Ind. Syst. (1864).

Hab. Surinam (*Cramer*); Rio Janeiro.

B.M.

I can find no mention made of this species in the ‘Genera of Diurnal Lepidoptera;’ yet there is not the slightest doubt that it belongs to this genus.

Var. *a.* *E. PIMPLA*, var., Felder, Wien. ent. Monatschr. vi. p. 177. n. 156 (1862).

Hab. Bahia.

B.M.

Var. *b.* *Ocello supra parvo, lineis marginalibus indistinctis; subtus ocellis anticarum parvis, apicali nec nigro; ocellis posticarum parvis, linea media externa medio subangulata.*

Hab. Tocantins River, Brazil (*Coll. Salvin*).

34. EUPTYCHIA PHRONIUS.

Satyrus phronius, Godart, Enc. Méth. ix. pp. 466 & 496. n. 65 (1819).

Neonympha phronius, Westw. & Hewits. Gen. Diurn. Lepid. p. 376. n. 21 (1851).

"*Alis integris, supra fuscis, limbo saturatiore: subtus flavidis, undis strigisque tribus fuscis; anticis puncto, posticis quatuor albis.*

"About $1\frac{1}{2}$ inch in expanse. The upperside of the wings is blackish brown, with the outer area very dark.

"The underside is yellowish, with a number of waves and three transverse lines dark brown; the outer line is flexuous, preceded in the front wings by a single white spot, and in the hind wings by four, the two outer ones encircled with black."—*Enc. Méth.*

Hab. Brazil.

35. EUPTYCHIA PÆON.

Satyrus pæon, Godart, *Enc. Méth.* ix. pp. 464 & 498. n. 43 (1819).

Euptychia pæon, Westw. & Hewits. *Gen. Diurn. Lepid.* p. 374. n. 23 (1851).

Hab. Brazil.

36. EUPTYCHIA OCHRACEA, sp. n.

In the collection of W. C. Hewitson.

37. EUPTYCHIA MARMORATA, sp. n. (Pl. XL. fig. 2.)

Alæ supra fuscae; anticæ fascia post alarum medium unaque ad cellæ extimum brevi fuscis indistinctis, linea submarginali unaque marginali undulatis fuscis; posticæ margine postico ochreo, puncto apud angulum analem fusco: corpus cinereo-fuscum, antennis supra fuscis, subtus ferrugineis.

Alæ anticæ subtus pallidiores, lineis velut supra distinctioribus; posticæ ochreo albido, fusco ochreoque marmoratæ, fasciis duabus mediis valde irregularibus ochreo-fuscis, linea submarginali unaque marginali undulatis fuscis, ocellis sex, duobus subapicalibus duobusque subanalibus nigris ochreo cinctis, punctis minutissimis albis bipupillatis, duobus obsoletis fuscis intermediis: corpus cinereum.

Exp. alar. unc. $1\frac{5}{8}$.

Hab. Rio Janeiro; Rio Grande (*Coll. Bates*).

B.M.

Allied to *E. pæon*.

38. EUPTYCHIA NECYS.

Satyrus necys, Godart, *Enc. Méth.* ix. pp. 466 & 511. n. 100 (1819).

Euptychia necys, Westw. & Hewits. *Gen. Diurn. Lepid.* p. 373. n. 14 (1851).

"*Alis integerrimis, supra nigricantibus, immaculatis; subtus nebuloso-cinereis, strigis tribus fuscis serieque punctorum sex albidorum.*

"About $1\frac{1}{2}$ inch in expanse. Wings above black brown, and without spots. The underside is ashy, spotted with brown, with three dark lines, transverse and waved—two between the base and the

middle, the third submarginal and preceded internally on each wing by a row of six whitish spots. The body is of the same colour as the wings; the antennæ are brownish, and annulated with grey above and ferruginous below."—*Enc. Méth.*

Hab. Brazil (*Godart*); Venezuela (*Westwood*).

Although this species is stated, in the 'Genera of Diurnal Lepidoptera,' to be in the British Museum Collection, I have not been able to find any specimens that agree with the description; it may possibly be allied to *E. byses*, *Godart*.

39. EUPTYCHIA GRIMON.

Satyrus grimon, *Godart*, *Enc. Méth.* ix. pp. 464 & 490. n. 44 (1819).

Neonympha grimon, *E. Doubleday*, *List Lep. Brit. Mus. App.* p. 33 (1847); *Westw. & Hewits. Gen. Diurn. Lepid.* p. 375. n. 10 (1851).

"*Alis subintegris, fuscis: subtus strigis tribus obscurioribus undatis; posticis ocellis duobus alteroque bipupillatis, maculis flavidis duabus interpositis.*"

"About $1\frac{1}{2}$ inch in expanse. Wings slightly dentated, brown, rather dark in some parts; upperside without spots. The underside shows three very dark lines, transverse and waved; between the central and outer ones the hind wings have a row of five spots, only the three exterior ones black, with a double white pupil and orange iris; the third and fourth yellowish, and at times somewhat reniform; the front wings also have two similar yellowish spots surmounted by a bipupillate ocellus. There is a double blackish line along the posterior margin of all the wings, scarcely perceptible on the upperside."—*Enc. Méth.*

Hab. Brazil.

B.M.

40. EUPTYCHIA ARGANTE.

Papilio argante, *Cramer*, *Pap. Exot.* iii. pl. 204. f. C, D (1782).

Euptychia argante, *Westw. & Hewits. Gen. Diurn. Lepid.* p. 374. n. 27 (1851).

Satyrus argulus, *Godart*, *Enc. Méth.* ix. pp. 463 & 488. n. 35 (1819).

Hab. Surinam.

This insect is intermediate between *E. grimon* and the next species.

41. EUPTYCHIA AMBIGUA, sp. n. (Pl. XXXIX. fig. 10.)

Alæ supra fuscae, lineis tribus marginalibus fuscis valde indistinctis, interna alterne dentata; posticæ linea marginali indistincta ochrea. Alæ subtus pallidiores, area apicali pallida, linea apud basim valde irregulari alteraque post alarum medium obliqua continua apud angulum posticarum analem subangulata, lineis marginalibus velut supra fuscis distinctis; anticæ et posticæ ocellis quinque linea fusca circumcinctis et argenteo minutissime bipupillatis serie angulata positis, anticis paulo minus distinctis, secundo anticarum et primo secundo quintoque posticarum nigris, aliis fuscis:

corpus fuscum pallidum, antennis fuscis albido fasciolatis et nigro flavoque acuminatis.

Exp. alar. unc. $1\frac{3}{8}$.

Hab. Rio Janeiro.

B.M.

42. EUPTYCHIA MODESTA, sp. n.

Alæ supra fuscae, lineis duabus marginalibus aliaque submarginali undulata obscurioribus, anticis valde indistinctis: corpus fuscum, præ olivaceo virescens; antennis supra brunneis albido fasciolatis et nigro acuminatis, subtus ferrugineis.

Alæ subtus pallidiores, cinerascetes, fasciis duabus mediis obliquis paulo irregularibus rufo-fuscis, lineis duabus marginalibus aliaque submarginali undulata fuscis: anticæ ocellis tribus ochreo cinctis, primo nigro, argenteo bipupillato; aliis fuscis: posticæ ocellis quinque fulvo cinctis et argenteo pupillatis, primo minimo, quinto maximo, primo secundo et quinto nigris, aliis fuscis, tertio quarto et quinto bipupillatis: corpus cinereum.

Exp. alar. unc. $1\frac{7}{8}$.

Hab. Para (Coll. Bates).

Var. *Alæ subtus ocellis minoribus lineisque tenuioribus.*

Hab. Cameta (Coll. Bates).

Allied to *E. ambigua*.

43. EUPTYCHIA HUEBNERI, sp. n. (Pl. XXXIX. fig. 11.)

Alæ supra velut in E. ambigua, subtus autem area basali paulo brunnescente, area apicali cinerascete, margine postico ochraceo, ocellis distinctioribus, lineis mediis rufescentibus, interna regulari, externa apud angulum analem paulo undulata, posticisque additur ocellus subanalis minimus: corpus fuscum, antennis velut in E. ambigua.

Exp. alar. unc. $1\frac{7}{16}$.

Hab. Para (Coll. Bates and B.M.).

Allied to the preceding species.

44. EUPTYCHIA GALEsus.

Satyrus galesus, Godart, Enc. Méth. ix. pp. 465 & 496. n. 64 (1819).

Neonympha galesus, Westw. & Hewits. Gen. Diurn. Lepid. p. 376. n. 20 (1851).

Euptychia canthe, var., Herrich-Schäffer, Ind. Syst. (1864).

“Alis integris, fuscis, supra immaculatis: subtus strigis tribus obscurioribus; anticis punctis nullis, posticis quinque nigricantibus.

“About $1\frac{1}{2}$ inch in expanse. All the wings entire and of a rather dark brown; upperside without spots; the underside shows three very dark lines, the central one relieved in front by greyish violet, the outer one very delicate and festooned; this last line is separated from the preceding one, but only in the hind wings, by a row of five

blackish points; the front wings have no spot, at least in the specimen from which this description is taken."—*Enc. Méth.*

Hab. Brazil.

I cannot agree with Dr. Herrich-Schäffer in considering this a variety of *E. canthe*: it is much too large for that species—although in this respect it does not differ from Hübner's figure, and consequently I suppose that some specimens may attain to the size of $1\frac{1}{2}$ inch; but the unspotted front wings seem certainly to indicate another species.

45. EUPTYCHIA VESPER, sp. n.

In the collection of W. C. Hewitson.

46. EUPTYCHIA ARMILLA, sp. n.

In the collection of W. C. Hewitson.

47. EUPTYCHIA LITURATA, sp. n.

In the collection of W. C. Hewitson.

48. EUPTYCHIA SOSYBIUS.

Papilio sosybius, Fabricius, Ent. Syst. iii. pt. l. p. 219. n. 684 (1793).

Satyrus sosybius, Godart, Enc. Méth. ix. pp. 465 & 495. n. 63 (1819); Boisduval et Leconte, Icon. Léop. Am. Septr. t. i. pl. 63. f. 1-4 (metamorph.) (1829).

Neonympha sosybius, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 2 (1851).

Hab. ♂, ♀, East Florida; ♀, Nicaragua.

B.M.

49. EUPTYCHIA FALLAX.

Neonympha fallax, Felder, Wien. ent. Monatschr. vi. p. 177. n. 157 (1862).

"*Alis supra fuscis, subtus pallidioribus, strigis binis fuscis subrectis [anticarum marginem internum versus convergentibus], litura discali, striga submarginali undulata alteraque marginali integerima fuscis, margine ante cilia nigro-fusco, anticarum ocellis quinque obsoletis, posticarum sex atris, anguste ochraceo iridatis, argenteo pupillatis, in posticis secundo, quinto et sexto distinctioribus.* ♂."—Wien. ent. Monatschr.

Hab. Rio Negro (Felder); ♂, Venezuela.

B.M.

Var. *Alæ subtus obscuriores; anticæ lineis mediis latius separatis, litura discali obsoleta; posticæ linea interna apud basim marginis terminata, externa magis irregulari.*

Hab. Venezuela.

B.M.

Var. *Alæ paulo majores ocellis lineisque subtus obscurioribus.*

Hab. Ega (Coll. Bates).

50. EUPTYCHIA ATALANTA, sp. n. (Pl. XXXIX. fig. 12.)

Alæ apice anticarum acuto, angulo anali posticarum minime obtuse producto: supra fuscae margine postico obscuriore, posticæ lineis

duabus marginalibus analibus nigro-fuscis: subtus pallidiores, ocellis velut in E. herme dispositis, lineis duabus mediis fuscis, anticarum de alarum medio excurrentibus, ad costam minime convergentibus, interna posticarum brevi subarcuata, externa bisinuata apud angulum analem subangulata; lineis tribus marginalibus, interna anticarum apud apicem bisinuata, posticarum sinuata medio angulis alternis; ciliis longis.

Exp. alar. unc. ♂ $1\frac{5}{16}$, ♀ $1\frac{3}{16}$.

Hab. ♂, ♀, Venezuela.

B.M.

Var. *Alis brevioribus, subtus ocellis fuscis distinctioribus, lineis mediis minus irregularibus.*

Hab. ♀, Para.

B.M.

51. EUPTYCHIA HERMES.

Papilio hermes, Fabricius, Ent. Syst. iii. pt. 1. p. 158. n. 486 (1793).

Satyrus hermes, var., Godart, Enc. Méth. ix. p. 487. n. 33 (part.) (1819).

Neonympha hermes, E. Doubleday, List Lep. Brit. Mus. p. 138 (1844); Westw. & Hewits, Gen. Diurn. Lepid. p. 375. n. 11 (1851).

Oreas (strigata) canthe, Hübner, Samml. exot. Schmett. Bd. i. pl. 87. f. 1-4 (1806).

Euptychia canthe, Westw. & Hewits, Gen. Diurn. Lepid. p. 373. n. 22 (1851).

Hab. Pernambuco; Rio Janeiro; Para; Nicaragua; Honduras.

B.M.

I have referred to the type specimen of *E. hermes*, three wings of which still exist in the Banksian Collection, and I find that it is identical with *E. canthe* of Hübner.

52. EUPTYCHIA UNDULATA, sp. n. (Pl. XXXIX. fig. 13.)

♀. *Alæ supra fusæ, subtus pallidiores, cano atomatis et paulo cinerascens; lineis duabus mediis, margini subparallelis, anticis late separatis et paulo irregularibus, posticis valde dentatis; linea submarginali sinuata aliaque marginali integerrima; margine nigro: anticæ aliquando ocellis quatuor valde indistinctis; posticæ ocellis sex paulo indistinctis parvis, secundo quarto et quinto nigro punctatis: corpus cinereum.*

Exp. alar. unc. $1\frac{2}{8}$ — $1\frac{3}{8}$.

Hab. Para.

B.M.

Chiefly differs from the preceding species in its slightly greater size, shorter wings, and very irregular central lines.

53. EUPTYCHIA BINALINEA, sp. n. (Pl. XXXIX. fig. 14.)

Alæ supra fusæ pallidæ, lineis duabus mediis, duabusque marginalibus fuscis, interna sinuata, externa subintegra; margine fusco: posticæ margine postico ochreo; ocellis duobus analibus (interno majore) nigris ochreo cinctis argenteoque pupillatis, aliisque tribus submarginalibus valde indistinctis: corpus cinereum.

Alæ subtus pallidiores, lineis duabus binis mediis margini subparallelis; aliisque tribus marginalibus unicus, interna autem ad angulum analem posticarum geminante, lineis mediis ochreum includentibus, interna posticarum paulo undulata, externa apud marginem internum sinuata apud costam undulata; linea marginali anticarum interna apud costam angulis alternis dentata, duabus externis integerrimis; lineis posticarum sinuatis: anticæ ocellis tribus indistinctis subapicalibus ochreo-fuscis fuscoque cinctis, infima punctis duobus minutissimis argenteis, albis, fusco pupillatis: posticæ ocellis sex nigris, ochreo pallido cinctis, fusco circumcinctis, et atomis argenteis pupillatis, primo, secundo et quinto bipupillatis: corpus ochreo-cinereum, antennis ferrugineis.

Exp. alar. unc. 1 $\frac{3}{8}$.

Hab. Venezuela; Pernambuco.

B.M.

54. EUPTYCHIA POLTYS.

Neonympha poltys, Prittwitz, Entom. Zeit. herausg. von dem entom. Vereine, Stettin, p. 311 (1865).

"Size of a moderately large *ædipus**. Wings lobed, costa folded over. Body and thorax blackish; antennæ the same. Palpi and underside of the body light brownish. All four wings ochreous (*pierre de feu*), the base sprinkled with dark atoms.

"Front wings: in the middle two dark oblique streaks, between them near the costa a darker angular line (upon which the discoidal cell terminates), close to the outer margin a more slender bent line, in front of the greyish fringe two parallel lines, all three dark reddish brown. Hind wings: a darker oblique streak, anal angle much produced; outer margin with its lower portion emarginate, with four sinuations; in front of the greyish fringe two sinuated brown bands, a little further inwards a third broader and darker one; between the three lines the ground-colour is lighter; at the inner angle in the left wing two, in the right wing one black spot encircled with yellow; Underside grey, dusted with brown. Front wing: markings as above, but more delicate; both of the central lines doubled; fringe and a shade near the outer oblique line violet-brown. Hind wings the same. The shade near the outer oblique line reaching from the costa to near the middle of the wing continued near the outer margin by six very small ocelli, the second and fifth of those within the cell have slender silver pupils. All the fringe brown, darker than the ground-colour."—*Ent. Zeit.*

Hab. Corcovado (South America).

55. EUPTYCHIA ACMENIS.

(*Oreas strigata*) *Megisto acmenis*, Hübner, Samml. exot. Schmett. Zutr. f. 233, 234 (1806).

Neonympha acmenis, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 14 (1851).

Hab. Baltimore.

* *ædipus* is a *Cænonympha*, not a *Neonympha*.

This species may be allied to *E. grimon*; but the central lines are very dissimilar in form to those of that insect, they much more nearly resemble those of the next species.

56. EUPTYCHIA EOÛS, sp. n. (Pl. XXXIX. fig. 15.)

Alæ supra olivaceo-fuscæ; anticæ linea undulata submarginali valde indistincta fusca, margine extremo nigro: posticæ puncto subanali nigro ochreo cincto, lineis duabus marginalibus alteraque submarginali fuscis: corpus thorace cinereo, abdomine olivaceo-fusco.

Alæ subtus pallidiores, lineis duabus mediis valde irregularibus, anticarum apud costam angulatis, posticarum externa ochreo marginata in medio valde producta, linea submarginali, apud apicem anticarum angulis alternis undata, in posticis sinuata et dentata ochreoque marginata, lineis duabus marginalibus ochreum includentibus, anticarum integris, posticarum undulatis: anticæ punctis tribus minutissimis subapicalibus, apicali nigro, secundo nigro argenteo bipupillato, tertio argenteo; posticæ ocellis quinque submarginalibus ochreo cinctis, primo minimo, quinto maximo, tertio et quarto obsoletis, aliis nigris argenteo pupillatis, primo et quinto bipupillatis: corpus cinereo-fuscum, antennis fuscis nigro acuminatis.

Exp. alar. unc. $1\frac{5}{16}$.

Hab. Brazil; Para.

B.M.

57. EUPTYCHIA PHARES.

Satyrus phares, Godart, Enc. Méth. ix. pp. 464 & 491. n. 47 (1819).

Neonympha phares, Westw. & Hewits. Gen. Diurn. Lepid. p. 375. n. 18, pl. 66. f. 4 (1851).

“Alis integris, supra fuscis: subtus anticis grisescentibus, strigibus ferrugineis: posticarum utraque pagina ocellis sex, 3° didymo.

“About $1\frac{1}{2}$ inch in expanse. The upperside of the wings blackish brown; front wings without spots; hind wings with six ocelli, the second and fourth very large, the third double. These ocelli are black, with a double silver pupil and yellow iris.

“The underside of the front wings is orange, with the apex rosy grey, and marked by one or two small ocelli; the underside of the hind wings is grey mottled with brown, with the same ocelli as on the opposite side; there are besides on each wing three dark-ferruginous distinctly waved lines—to wit, two near the base, and a third near the outer margin, which is bordered by a black festooned line.”
—*Enc. Méth.*

Hab. Brazil; Venezuela.

B.M.

The Museum specimens of this species vary considerably in size, the largest measuring $1\frac{7}{16}$ inch in expanse of wings, whilst the smallest only measures $1\frac{1}{8}$ inch. We have only one specimen that has no spots in the front wings on the upperside; all the others have one distinct subapical ocellus.

The MS. name of *pharella*, applied to Mr. Doubleday's species

by Dr. Herrich-Schäffer in his 'Index Systematicus,' was not needed, as the insect figured in the 'Genera' is undoubtedly Godart's species.

58. EUPTYCHIA PHARELLA, sp. n. (Pl. XXXIX. fig. 16.)

Alæ corpusque supra olivaceo-fusca.

Alæ subtus pallidiores, anticæ ochreo suffusæ; linea indistincta ferruginea post alarum medium posita et margini subparallela, lineis duabus submarginalibus fuscis, interna sinuata, margine ipso nigro, ciliis olivaceo-fuscis: anticæ ocellis tribus subapicalibus ochreo cinctis violaceoque pupillatis, apicali nigro, aliis fuscis: posticæ ocellis quatuor ochreo cinctis, duabus externis nigris albo pupillatis, apicali majore, aliis fuscis violaceo pupillatis: corpus cinereo-fuscum, antennis ferrugineo-olivaceis.

Exp. alar. unc. 1.

Hab. Rio Janeiro.

B.M.

This species differs from *E. phares* in its much smaller expanse of wings, the absence of any ocelli on the upperside, the more regular rounded hind wings,—on the underside in the smaller and fewer ocelli with differently coloured pupils, and the differently formed central lines on the hind wings.

59. EUPTYCHIA HARMONIA, sp. n. (Pl. XXXIX. fig. 17.)

Alæ supra olivaceo-fusca; corpus nigrescens.

Alæ subtus pallidiores, anticæ lineis duabus mediis lituraque intermedia fuscis apud costam divergentibus tunc subangulatis, lineis tribus marginalibus valde indistinctis fuscis; ocellis quatuor submarginalibus, ochreo cinctis fuscoque circumcinctis, externis nigris, apicali albo pupillato, intermediis fuscis vix distinguendis: posticæ basi fuscescente, lineis duabus mediis, interna extus trisinuata, externa medio et apud angulum analem angulata; lineis duabus subapicalibus, tertioque marginali fuscis; ocellis quinque submarginalibus ochreo cinctis, secundo maximo, tertio indistincte parvo, primo secundo quarto et quinto nigris albo pupillatis: corpus cinereum.

Exp. alar. unc. 1½.

Hab. Quito (Ecuador).

B.M.

Var. Alæ subtus distinctioribus, ocellis anticis duobus.

Hab. Ecuador (Coll. Bates).

60. EUPTYCHIA PHINEUS, sp. n. (Pl. XXXIX. fig. 18.)

Alæ supra fusca obscuræ, corpus cinerascens, antennis fuscis.

Alæ subtus paulo pallidiores nitentesque, lineis mediis ocellisque posticarum iis Harmoniæ simillimis sed paulo distinctioribus; anticæ lineis tribus marginalibus distinctis fuscis, ocello uno subapicali nigro, ochreo cincto alboque pupillato, margine postico subconcavo: posticæ lineis tribus marginalibus fuscis undatis, margine postico undulato: corpus cinereo-fuscum.

Exp. alar. unc. 1⅙.

Hab. Venezuela.

B.M.

Allied to the preceding species, but darker; the underside markings more distinct, only one ocellus in the front wings; the hind margin of the front wings slightly concave, of the hind wings sub-sinuate.

61. EUPTYCHIA NEBULOSA, sp. n.

Alæ supra olivaceo-fuscæ, posticæ lineis duabus marginalibus aliaque submarginali fuscis indistinctis: corpus cinerascens; antennis supra fuscis, subtus ferrugineis.

Alæ subtus pallidiores roseo tinctis, lineis duabus mediis irregularibus fuscis, margini subparallelis, lineis duabus marginalibus aliaque submarginali sinuata fuscis: anticæ ocello apicali parvo indistincto nigro ochreo cincto alboque pupillato; posticæ ocellis quinque, secundo quintoque magnis, primo, secundo quintoque nigris ochreo cinctis alboque bipupillatis, aliis ochreo-fuscis: corpus cinerascens.

Exp. alar. unc. $1\frac{9}{16}$.

Hab. Venezuela.

B.M.

Allied to the preceding species, but quite distinct.

62. EUPTYCHIA NOSSIS.

Euptychia nossis, Hewitson, Exot. Butterf. iii. pl. ? f. 1 (underside view) (1862).

Hab. Quito (Coll. W. W. Saunders and W. C. Hewitson).

63. EUPTYCHIA PRONOPHILA, sp. n.

In the collection of W. C. Hewitson.

64. EUPTYCHIA SATURNUS, sp. n. (Pl. XXXIX. fig. 19.)

♂. *Alæ supra olivaceo-fuscæ, margine obscuriore: posticæ macula apicali fusca; ocello subanali nigro, albo pupillato albidoque cincto: corpus cinereum.*

Alæ subtus nivæ, apud basim paulo fuscescentes, fascia submarginali lata fusca, lineis duabus mediis tribusque marginalibus fuscis, posticarum sinuatis: anticæ ocellis duobus nigris ochreo cinctis fuscoque circumcinctis, apicali majore albo pupillato: posticæ ocellis quinque, primo, secundo quintoque nigris fulvo cinctis alboque pupillatis, tertio quartoque fuscis brunneo cinctis argenteoque bipupillatis, primo minimo, quinto maximo: corpus albido-cinereum.

Exp. alar. unc. $1\frac{11}{16}$.

Hab. Venezuela; Brazil (Coll. Bates).

B.M.

Allied to *E. nossis* (Hewitson).

65. EUPTYCHIA VESTA, sp. n. (Pl. XXXIX. fig. 20.)

♂. *Alæ supra olivaceo-fuscæ: anticæ margine postico fuscescente; stria apud cellæ extimum fasciaque de costa post cellam currente, margini subparallela, de lunulis elevatis formata, lineis tribus marginalibus fuscis, interna apud apicem sinuata: posticæ lineis tribus marginalibus fuscis duabusque inter eas albidis; ocellis*

duobus subanalibus nigris flavo cinctis argenteoque bipupillatis, anali minimo.

Alæ subtus pallidiores: anticæ area apicali paulo pallidiore, maculis quatuor indistinctis submarginalibus ochreo-fuscis; ocello apicali nigro, ochreo cincto alboque bipupillato; linea post medium alarum obliqua irregulari fusca; linea submarginali undata duabusque marginalibus nigro-fuscis: posticæ lineis duabus submediis fuscis, basali trisinuata, externa biconcavata, sinu medio alteroque interno; fascia media albida; margine postico late olivaceo-fusco; fascia media irregulari ochrea, ocellis sex argenteo bipupillatis interrupta, secundo duobusque analibus nigris ochreo cinctis, aliis fuscis albido cinctis; lineis tribus marginalibus undulatis nigro-fuscis: corpus ochreo-cinereum.

Exp. alar. unc. $1\frac{5}{8}$.

♀. *Alis latioribus: anticæ fascia post alarum medium obliqua fusca, continua nec elevata: posticæ ocello apicali distincto nigro, flavo cincto nec pupillato: anticæ subtus punctis duobus apud apicem submarginalibus albis ocelloque velut in mari, linea media externa, sinu interno irregulari: aliter velut in mari.*

Exp. alar. unc. $1\frac{5}{8}$.

Hub. Venezuela.

B.M.

Allied to the preceding species; the male has on the front wings a row of lunular spots, raised above the surface of the wings, as if embossed.

66. EUPTYCHIA ENYO, sp. n. (Pl. XXXIX. fig. 22.)

Alæ supra pallidæ: anticæ fuscæ, fasciis duabus mediis obliquis, una submarginali alteraque marginali, fuscis indistinctis, macula subapicali fusca: posticæ fuscæ, area apicali rufescente, fasciis duabus mediis obliquis, una submarginali, lineaque marginali fuscis indistinctis; macula subanali fusca: corpus cinereo-fuscum, antennis fuscis præ fulvescentibus.

Alæ subtus ochreæ, fasciis rufo-fuscis; posticæ ocello anali minimo ad angulum extremum posito, macula anuli rubra, ocellis nigris majoribus; aliter velut in E. mollina, Huebneri.

Exp. alar. unc. $1\frac{3}{8}$.

Hab. Cuenca.

B.M.

This species is quite unique in appearance, the reddish colouring of the hind wings giving it the look of a very distinct species; it is, however, closely allied to *E. mollina*.

67. EUPTYCHIA MOLLINA.

(*Oreas strigata*) *Euptychia mollina*, Hübner, Samml. exot. Schmett. Zuträge, f. 105, 106 (1806).

Euptychia mollina, E. Doubleday, List Lep. Brit. Mus. App. p. 31 (1847).

E. molina, Hübner, Verz. bek. Schmett. p. 54. n. 509 (1816).

Hab. Para; Ega.

B.M.

This species is not identical with the one from Venezuela and the West Indies; it differs from it in size, pattern, and coloration.

68. EUPTYCHIA WESTWOODII, sp. n.

Neonympha mollina, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 17 (1851).

Alæ supra albæ, margine postico et antico anticarum paulo fusciscentibus: anticæ ocello subapicali fusco, distincto, albido cincto; fasciis ut in E. mollina dispositis: posticæ lineis duabus irregularibus marginalibus apud apicem connexis fuscis; maculis fasciisque aliis velut in E. mollina: corpus ochreo-cinereum; antennis supra fuscis cinereo-fasciolatis, subtus ferruginosis.

Alæ subtus albæ, fasciis rufo-fuscis, nec ad costam anticarum approximantibus, linea marginali anticarum valde irregulari, ocellis duobus nec quatuor apicalibus.

Exp. alar. unc. $1\frac{1}{16}$; aliter velut in E. mollina.

Hab. Honduras.

B.M.

Var. *Alæ supra fasciis maculisque indistinctis, fasciis subtus rufo-olivaceis; anticæ ocello uno maculisque duabus albidis.*

Exp. alar. unc. $1\frac{1}{4}$.

Hab. Venezuela.

B.M.

This species, although somewhat resembling the *mollina* of Hübner, is far too distinct to be considered a mere variety; the different coloration, regular reddish central bands, more irregular double marginal lines, and small number of ocelli are quite characters enough to warrant its separation as a species.

Division II.

Alæ supra subtusque violaceo, cæruleo viridive variæ.

69. EUPTYCHIA PICEA, sp. n.

Alæ supra nigro-fuscæ, margine postico paulo dilutiore, minime violascentes: anticæ fasciis quinque nigris, prima basali brevi obliqua venæ subcostalis basim marginante, secunda tertiaque mediis obliquis ad costam approximantibus, quarta submarginali apud costam intus currente, ad marginem internum tertiam approximante, quinta marginali: posticæ fasciis nonnullis vix distinguendis lineisque duabus marginalibus nigris: corpus fuscum.

Alæ subtus albidæ, violascentes, ciliis fuscis: anticæ linea marginali nigra, fasciis aliis velut supra rufo-fuscis, ocellis tribus subapicalibus nigris ochreo-albo cinctis, apicali maximo alboque pupillato: posticæ fasciis quatuor, duabus basalibus, una media quartaque submarginali lunulata ad costam et angulum analem tertiam adjungente, linea marginali nigra; ocellis quatuor nigris albo pupillatis et flavo cinctis inter fascias apicales positos, secundo quartoque magnis, tertio quartoque iride una inclusis: corpus albidum; antennis supra fuscis, subtus albidis.

Exp. alar. unc. $1\frac{1}{4}$.

Hab. Ega.

B.M.

Var. a. *Alæ supra obscuriores, subtus fasciis mediis latius separatis.*

Hab. Brazil.

B.M.

Var. *b. Alæ anticæ subtus ocellis apicalibus contiguis iride una inclusis.*

Hab. Tapajos.

B.M.

Var. *c. Alæ anticæ ocellis duobus, posticæ tribus, interna anali puncto solum indicato.*

Hab. Para (*Coll. Salvin and B.M.*).

70. EUPTYCHIA LYSIDICE.

Papilio lysidice, Cramer, Pap. Exot. ii. pl. 169. f. C, D, ♂ (1779); Fabricius, Ent. Syst. iii. pt. 2. p. 156. n. 480 (1793).

Erycina lysidice, Godart, Enc. Méth. ix. p. 583. n. 92 (1819).

(*Oreas strigata*) *Lysidice*, Hübner, Samml. exot. Schmett. Bd. i. pl. 86. f. 1, 2 (♂), 3, 4 (♀) (1806).

Euptychia lysidice, Hübner, Verz. bek. Schmett. p. 54. n. 507 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 12 (1851).

Papilio doris, Cramer, Pap. Exot. i. pl. 8. f. B, C (♀) (1779); Fabricius, Ent. Syst. iii. pt. 1. p. 101. n. 314 (1793).

Euptychia doris, Westw., Doubl. & Hewits. Gen. Diurn. Lepid. p. 373. n. 13 (1851).

Hab. Surinam (*Cramer*); Para, Tapajos, Ega, Nauta, Brazil (*Coll. Bates and B.M.*); Trinidad, Cassim R. (*Coll. Salvin*).

71. EUPTYCHIA GLAUCINA.

♂. *Euptychia glaucina*, H. W. Bates, Ent. Month. Mag. i. p. 202. n. 76 (1865).

Hab. Duenas (Guatemala) (*Coll. Salvin*).

This species is allied to *E. lysidice*, but is very distinct from it.

72. EUPTYCHIA ÆGROTA, sp. n.

♂. *Alæ supra cæruleæ: anticæ margine late et regulariter nigro, fascia media lineaque brevior adjacente subbasali nigris subdirectis integris: posticæ apice, margine tenui maculaque subanali ovali nigris: corpus albido-cinereum; antennis supra fuscis, subtus albidis, apud apicem flavescens et nigro acuminatis.*

Alæ subtus albido-cæruleæ, lineis duabus mediis distinctis nigris ferrugineo tinctis, linea submarginali lunulata duabusque tenuioribus subintegris nigris: anticæ ocellis tribus punctoque costali nigris, ocello subapicali nigro, cæruleo (ochreo tincto) cincto et nigro circumcincto, aliis duobus de circulis nigris, atomos nigros lunulas indistinctas formantes includentibus: posticæ ocellis tribus (primo minimo) nigris ochreo cinctis, nigro circumcinctis et argenteo bipupillatis, duobus subapicalibus tertio post disci medium posito; inter hos circulis duobus nigris piriformibus, seriem efficientibus; litura maculaque basalibus nigris: corpus albicans.

Exp. alar. unc. 1 $\frac{9}{16}$.

♀. *Alæ supra velut in lysidice ♀; subtus brunnescentes fasciis tenuibus; anticæ ocellis quatuor indistinctis; posticæ ocellis sex distinctis; aliter velut in E. lysidice, ♀.*

Hab. Para (♂, *Coll. Hewitson*; ♀, *Coll. Hewitson and B.M.*).

This beautiful little insect seems to be intermediate between *E. glaucina* and *E. pilata*; the female is very like *E. lysidice*, ♀; the male is of the same form as my *E. pilata*, but totally differs from it in marking; it will be figured in a supplementary paper.

73. EUPTYCHIA PILATA, sp. n. (Pl. XL. fig. 3.)

♂. *Alæ latæ, breves, supra cæruleæ: anticæ violascentes, macula interna discali fulva de pilis formata, marginibus costali posticoque fuscis, cellæ extimo venisque paulo fuscescentibus: posticæ certo situ virescentes, apice nigro, linea submarginali, altera marginali indistincta et margine ipso nigris; ciliis albidis: corpus cinereum; antennis supra fuscis, subtus ferrugineis.*

Alæ subtus cæruleæ, certo situ paulo virescentes; lineis duabus mediis obliquis nigris, rufo sparsis; linea submarginali duabusque tenuissimis marginalibus undulatis nigris: anticæ ocellis quatuor obsoletis, apicali iride flava: posticæ sex, tertio quartoque obsoletis, aliis nigris iride flava: corpus cæruleum, præ cinerascens.

Exp. alar. unc. $1\frac{7}{8}$.

Hab. Ega.

B.M.

74. EUPTYCHIA BRIXIOLA, sp. n. (Pl. XL. fig. 4.)

Alæ supra pallidæ, maris cinereæ, feminae fuscae, stria basali, duabus mediis, quarta discali, quinta submarginali sextaque tenui marginali, regularibus obscurioribus; margine ipso nigro: stria quarta posticarum et ocellis duobus indistinctis nigris, iride alarum colore, fusco circumcinctis, minime albido pupillatis: corpus cinereum; antennis supra nigro-fuscis, subtus paulo flavescentibus.

Alæ subtus albidæ, fasciis velut supra distinctioribus fuscis: anticæ maris oculo subapicali obsoleto, fæminæ distincto nigro ochreo cincto et argenteo bipupillato, aliisque duobus valde indistinctis argenteo pupillatis: posticæ ocellis quinque, primo minimo, secundo et quinto maximis, his nigris fulvo cinctis et argenteo bipupillatis, tertio et quarto argenteis flavo cinctis, quarto elongato: corpus cinereum.

Exp. alar. unc. $1\frac{3}{8}$.

Hab. Para (Coll. Bates).

Allied to *E. brixius*, but smaller and differently coloured.

75. EUPTYCHIA BRIXIUS.

Satyrus brixius, Godart, Enc. Méth. ix. pp. 464 & 490. n. 42 (1819).

Euptychia brixius, Westw., Doubl. & Hewits. Gen. Diurn. Lepid. p. 374. n. 24 (1851).

"*Alis integris, teneris, cærulescentibus, strigis utrinque sex fuscis; posticarum quarta subtus ocellis quinque bipupillatis.*

"Expanse of wings about $1\frac{1}{2}$ inch. The upperside of the wings is ashy blue, with six transverse streaks, and a double black-brown marginal line.

"On the underside the design of the upperside is repeated; but

the ground-colour is paler, and the fourth streak of the hind wings has five ocelli, only the first, second, and last with whitish iris, the other two without iris: all the ocelli are black and bipupillated with silver."—*Enc. Méth.*

Hab. Brazil.

76. EUPTYCHIA CÆLESTIS, sp. n. (Pl. XL. fig. 5.)

♂. *Alæ supra cæruleæ: anticæ area apicali fasciisque duabus mediis brevibus fuscescentibus: posticæ lineis marginalibus duabus distinctis submarginalique indistincta nigris, apice alarum fuscescente: corpus ochreo-cinereum; antennis supra fuscis, subtus flavis, nigro acuminatis.*

Alæ subtus cæruleæ: anticæ area anali paulo violascente, costa media, fasciis duabus mediis, brevioribus apud marginem posticum, una submarginali irregulari duabusque marginalibus subintegris fuscis: posticæ fasciis duabus mediis, externa undulata, ad marginem internum linea tenuissima junctis, fascia apud marginem posticum brevioribus, una submarginali undulata duabusque marginalibus undatis fuscis: anticæ ocellis duobus subapicalibus nigris iride cærulea fusco circumcinctis, apicali majore; posticæ quinque, secundo et quinto magnis, nigris albido cinctis, aliis cæruleis fusco cinctis: corpus albido-fuscum.

Exp. alar. unc. $1\frac{1}{16}$.

♀. *Alæ supra cæruleæ: anticæ area apicali fasciisque duabus mediis brevibus fuscis: posticæ linea marginali tenuissima duabusque distinctis, apice, puncto subanali circuloque ad cellæ extimum fuscis, fasciis marginalibus nigro-fuscis: corpus ochreo-cinereum; antennis supra albidis, subtus flavis.*

Alæ subtus anticæ ocello uno; posticæ quinque distinctioribus; margine interno anticarum albido; aliter velut in mari.

Exp. alar. unc. 2.

Hab. Ega.

B.M.

♀. Var. Minor, *cæruleo-lucescente, fasciis anticarum circuloque posticarum minus distinctis, subtus fasciis tenuibus minus distinctis ocellis parvis; ocellis duobus, secundo quintoque distinctis, secundo parvo, aliis via distinguendis.*

Exp. alar. unc. $1\frac{5}{8}$.

Hab. Para (Coll. Salvin).

This may possibly prove to be the female of another species; but it is very closely allied to the Ega female.

77. EUPTYCHIA URANIA, sp. n. (Pl. XL. fig. 6.)

♂. *Alæ supra viridi-cæruleæ, nitidæ: anticæ costa et margine postico olivaceo-fuscis, stria post cellæ extimum olivaceo-fusca: posticæ margine postico fusco marginato, lineis duabus indistinctis marginalibus fuscis: corpus cinereo-fuscum, atomis cæruleis rotatum; antennis ferrugineis.*

Alæ subtus cæruleæ, costis, lineis duabus mediis obliquis, tertia apud marginem posticum interrupta, quarta submarginali et quinta

marginali fuscis ; margine ipso fusco ; apice anticarum et angulo anali posticarum olivaceo fusciscentibus : anticæ ocello subapicali indistincto nigro ; posticæ ocellis duobus nigris, aliis tribus haud indicatis, striis marginalibus undatis : corpus olivaceo-albidum.

Exp. alar. unc. $1\frac{7}{8}$.

Hab. Cameta (*Coll. Bates*).

Closely allied to *E. cælestis*.

78. EUPTYCHIA LEA.

Papilio lea, Cramer, Pap. Exot. ii. pl. 151. f. C, D (♀) (1779).

Satyrus lea, Godart, Enc. Méth. ix. pp. 464 & 492. n. 50 (1819).

Euptychia lea (*ebusa*, part.), Hübner, Verz. bek. Schmett. p. 54. n. 515 (1816).

Euptychia lea, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 17 (1851).

Hab. Surinam.

79. EUPTYCHIA JUNIA.

Papilio junia, Cramer, Pap. Exot. iv. pl. 292. f. D (♂ upperside), E (♀ ?underside) (1782).

Euptychia junia, Hübner, Samml. exot. Schmett. Zuträge, f. 627, 628 (♀) (1806), Verz. bek. Schmett. p. 54. n. 511 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 18 (*E. lea*, alt. sexus?) (1851).

Satyrus lea, var., Godart, Enc. Méth. ix. p. 492. n. 50 (1819).

Hab. Surinam (*Cramer*); Bahia (*Westwood*); Brazil, ♂. B.M.

Var. ♀. *Area apicali anticarum supra vix fusciscente, posticarum paulo fusciscente.*

Hab. Para (*Coll. Salvin and B.M.*).

This species, although allied to *E. lea*, is, I think, far too distinct to be a mere variety of it. I do not believe that the two insects are merely sexes. We possess a slight variety of the female of *E. junia* which certainly is not the *lea* of Cramer; and Hübner's figure of the female of *E. junia* differs considerably from Cramer's figure of *lea*—more, I think, than can be accounted for by the age of the book.

80. EUPTYCHIA PHILIPPA, sp. n.

Alæ supra fuscae ; area apicali posticarum maris et areis basalibus femine cinereo cærulescentibus ; lineis duabus marginalibus fuscis indistinctis, anticis apud costam, posticisque undulatis : corpus cinereo-fuscum ; antennis supra fuscis, subtus ferrugineis, apud apicem nigro fasciolatis albidoque acuminatis.

Alæ subtus fasciis duabus mediis : posticæ subintegræ, ocellis majoribus : aliter velut in E. junia.

Exp. alar. unc. $2\frac{1}{16}$.

Hab. Ega (*Coll. Bates*).

This species is closely allied to *E. junia*, and scarcely differs from it on the underside; the colouring of the upperside, however, is so totally distinct that it must be considered a good species.

Division III.

Alæ magnæ, supra fuscæ, subtus fasciis duabus mediis; ocellis magnis regularibus.

81. EUPTYCHIA ANTONOË.

Papilio antonoë, Cramer, Pap. Exot. i. pl. 59. f. E, F (♂) (1779).

Satyrus hermes (part.), Godart, Enc. Méth. ix. p. 487 (1819).

Hab. Para; Bolivia (♀, *B.M.*); —? (♂, *Coll. Salvin.*).

This insect is quite distinct from the *antonoë* of the 'Genera of Diurnal Lepidoptera;' that species is the *libye* of Linnæus. It is also widely distinct from the insect generally supposed upon the continent to be Cramer's species, and which I have here described and figured as *E. erichtho*.

82. EUPTYCHIA GIGAS, sp. n. (Pl. XL. fig. 7.)

♀. *Alæ supra fuscæ, fascia media obscuriore valde indistincta, lineis duabus undulatis marginalibus unaque submarginali fuscis, posticarum nigrescentibus: posticæ ocello permagno subanali nigro, rubro cincto alboque pupillato: corpus fuscum; antennis flavis, apice nigro, albo acuminatis.*

Alæ subtus pallidiores, roseo tinctis, fascia media alteraque apud basim rufo-fuscis; area apicali paulo pallidior, anticarum ochreo variegata; lineis duabus marginalibus undulatis unaque submarginali angulis alternis undata fuscis: anticæ ocellis tribus subapicalibus, apicali distincto, nigro, flavo cincto alboque pupillato, aliis minimis brunneis, pupilla violacea, indistinctis: posticæ ocellis quinque paulo piriformibus, quinto maximo, primo, secundo quinq-ue nigris flavo cinctis alboque pupillatis, tertio quartoque brunneis, iride obsoleta, albido pupillatis: corpus ochraceo-fuscum.

Exp. alar. unc. $2\frac{1}{2}$.

Hab. Mexico.

B.M.

This species is of the same size as *antonoë* of Cramer, to which it is allied; it more nearly resembles *E. libye* in the pattern of the underside.

83. EUPTYCHIA LIBYE.

Papilio libye, Linnæus, Syst. Nat. ii. p. 772. n. 146 (1766); Sulzer, Gesch. pl. 17. f. 7; *P. lybie* ejusd. p. 145 (1776).

Neonympha? antonoë, E. Doubleday, List Lep. Brit. Mus. i. p. 138 (1844).

Neonympha antonoë, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 12 (1851).

Euptychia antonoë, Westw. & Hewits. Gen. Diurn. Lepid. p. 374. n. 30 (1851).

Hab. Pernambuco, Bahia, Rio, Honduras, Para, Quito (*B.M.*); Jamaica; Polochic Valley, Guatemala (*Coll. Salvin.*).

Var. *Parva, obscura.*

Hab. Quito.

B.M.

84. EUPTYCHIA LIBYOIDEA, sp. n.

♂. *Alæ supra fuscae immaculatæ, lineis marginalibus velut in E. libye dispositis: subtus pallidæ, albido-cinereæ, lineis duabus mediis integris obliquis rufo-fuscis: anticæ ocellis quatuor apud marginem posticum nigro-fuscis, flavo cinctis et irregulariter atomis albis pupillatis; serie ocellorum ad costam punctis duobus fuscis continuata; linea submarginali nigro-fusca irregulari, apud costam angulis alternis arcuata; lineis duabus marginalibus tenuibus nigro-fuscis: posticæ ocellis quinque submarginalibus piriformibus, secundo et quinto majoribus, quinto maximo, flavo cinctis et albo pupillatis, tertio et quarto fuscis, aliis nigris; ocello simili minimo ad marginem internum, fasciam externam mediam terminante; linea submarginali irregulari rufo-fusca; dimidio apicali angulis alternis undato; duabus marginalibus tenuibus undulatis nigro-fuscis: corpus ochreo-fuscum; antennis albido-ferrugineis, fusco subacuminatis.*

Exp. alar. unc. 2 $\frac{5}{16}$.

Hab. Nicaragua.

B.M.

This species is closely allied to *E. libye*, Linn., of which at first I imagined it to be a variety; but I am now quite satisfied that it is a good and distinct species; it differs from it as follows:—in being about a quarter of an inch larger in expanse of wing; the front wings more produced at the apex, with no pale discal spot*; the hind wings not so abruptly scalloped; on the underside it differs in being of a much more uniform colour, with narrower and more distinct central bands, the submarginal lines also being more irregular; in having four more or less distinct ocelli in the front wings; and the ocelli of the hind wings very much larger and more distinctly pupillated.

85. EUPTYCHIA OBSCURA, sp. n.

♀. *Alæ supra velut in E. libye; subtus anticæ colore simili, linea irregulari sinuata et dentata post medium posita, altera submarginali undata duabusque marginalibus integris nigro-fuscis, punctis tribus subapicalibus minutissimis albis serie angulata positis: posticæ obscuriores, linea apud basim angulata, altera post medium irregulari undata, tertia submarginali sinuata ad marginem internum secundam adjungente duabusque marginalibus undulatis nigro-fuscis; ocellis quinque, secundo quintoque nigris iride tenuissima flava pupillaque alba, aliis reniformibus ochreo-fuscis, apicali albo pupillata.*

Exp. alar. unc. 2 $\frac{3}{8}$.

Hab. Bolivia.

B.M.

Allied to *E. libye*, Linnæus.

86. EUPTYCHIA VASTATA, sp. n.

Alæ supra fuscae cupreo nitentes: corpus fuscum, præ nigrescens; antennis supra nigro-fuscis, subtus albido fasciatis flavescentibus. Alæ subtus olivaceo-fuscae: posticæ et area apicalis anticarum undis

* This is also the case with Panama specimens of *E. libye*.

plurimis variegatæ; lineis duabus marginalibus aliaque submarginali sinuata fuscis: anticæ linea discali lunulata fusca; punctis tribus subapicalibus fulvis: posticæ lineis duabus mediis irregularibus; punctis quinque submarginalibus fulvis: corpus cinereo-fuscum.

Exp. alar. unc. $1\frac{1}{6}$.

Hab. Rio Grande (*Coll. Bates*).

Allied to the preceding species.

87. EUPTYCHIA QUANTIUS.

Satyrus quantius, Godart, Enc. Méth. ix. pp. 463 & 487. n. 31 (1819).

Neonympha quantius, Westw. & Hewits. Gen. Diurn. Lep. p. 376. n. 23 (1851).

"Alis fuscis, supra immaculatis: posticis subtus fascia media limboque posteriore violaceo-cinereis, striga punctorum flavescentium interposita.

Scarcely 2 inches in expanse. Wings entire, dark brown; the upperside without spots.

"The underside of the hind wings has two bands of ashy violet, — one discoidal, transverse, and margined by two lines a little darker than the ground-colour; the other quite terminal, dentated on its inner edge, and separated from the preceding one by a transverse row of six yellow spots: the underside of the front wings has the hind margin cinereous, and preceded by four spots of the colour of those in the hind wings, but smaller."—*Enc. Méth.*

Hab. Brazil (*Godart*); Venezuela.

B.M.

? Var. *a.* *Anticæ apice paulo subangulato, subtus punctis quinque fulvis: posticæ puncto apicali magno.*

Hab. Rio Grande (*Coll. Bates*).

Var. *b.* *Alæ majores, subtus valde obscuriores: anticæ punctis quinque fulvis.*

Hab. Rio Janeiro.

B.M.

88. EUPTYCHIA POLYPHEMUS, sp. n.

Alæ supra fuscae: corpus fuscum; antennis supra fuscis, subtus minime præ ferrugineis.

Alæ subtus paulo pallidiores, lineis duabus mediis obliquis bene separatis, interna irregulari, externa anticarum intus angulariter bisinuata, posticarum ad costam angulis duobus alternis, ad marginem internum intus profunde bisinuata; linea submarginali sinuata; linea submarginali et margine ipso subintegro, nigro-fuscis: anticæ punctis tribus minimis subapicalibus albidis: posticæ ocellis quinque submarginalibus, primo, secundo, tertio et quarto microscopio solum distinguendis, primo et secundo albo pupillatis, quinto subanali nigro, distincto, albo pupillato: corpus fuscum.

Exp. alar. unc. 2.

Hab. Bogota.

B.M.

This species seems to be most closely allied to *E. quantius*; with a magnifying-glass three indistinct brown ocelli with white pupils may be seen on the front, and five on the hind wings below.

Division IV.

Alæ supra fuscae, plerumque violascentes; subtus maculis ocellatis mediis, posticarum plerumque elongatis, argenteis.

Subdivision 1.

Alæ subtus ocellis regularibus nec elongatis.

89. EUPTYCHIA CLUENA.

Papilio (Nymph.) cluena, Drury, Ill. iii. p. 9, pl. 7. f. 5, 6 (1782).

Euptychia cluena, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 3 (1851).

Papilio clueria, Fabricius, Ent. Syst. iii. pt. 1. p. 229. n. 716 (1793).

Satyrus clueria, Godart, Enc. Méth. ix. p. 492. n. 51 (1819).

Euptychia clueria, E. Doubleday, List Lep. Brit. Mus. i. p. 122 (1844).

Hab. Brazil.

B.M.

The figure given by Drury of this species does not agree entirely with the specimens in the National Collection; the ocelli of the upperside are pupillated, with small central irides, and in our specimens with simple white spots; the underside bands are quite different, those in Drury's figure being placed near together, and the outer one angulated in the middle. In all the specimens that I have seen the outer central band is entire, excepting at the inner margin, where it takes a sudden angle inwards; the ocelli of the underside are also represented as being all alike, and only one in the front wings. It is just possible that these differences may be owing to incorrect drawing, especially as he describes the insect as $2\frac{1}{4}$ inches in expanse (the usual size of the females), but figures it $2\frac{1}{2}$ inches, and as the colouring of the figure does not altogether agree with the description.

90. EUPTYCHIA SERICEELLA.

Euptychia sericeella, H. W. Bates, Ent. Month. Mag. i. p. 202. n. 75 (1865).

Hab. Vera Paz, Guatemala (*Coll. Salvin*).

This species appears to be intermediate between *E. cluena*, Drury, and *E. ebusa*, Cramer.

91. EUPTYCHIA EBUSA.

Papilio ebusa, Cramer, Pap. Exot. iv. pl. 292. f. F, G (1782).

Euptychia ebusa, Hübner, Verz. bek. Schmett. p. 54. n. 515 (1816); E. Doubleday, List Lep. Brit. Mus. i. p. 123 (1844); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 16 (1851).

Papilio aranea, Fabricius, Ent. Syst. iii. pt. 1. p. 97. n. 299 (1793).

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Satyrus aranea, Godart, Enc. Méth. ix. pp. 464 & 492. n. 49 (1819).

Hab. Guiana (*Westwood*); Pernambuco; Bahia; Para; Venezuela. B.M.

92. EUPTYCHIA BYSES.

Satyrus byses, Godart, Enc. Méth. ix. pp. 466 & 496. n. 67 (1819); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 9 (1851).

Hab. Rio Janeiro. B.M.

Var. *Alæ supra magis cærulescentes, ocellis subtus minimis; alæ aliquando purpureo, albo, viridi, ochreove variæ.*

Hab. Brazil. B.M.

This species is very accurately described by Godart; it, however, varies exceedingly in the size of the ocelli and the ground-colour of the underside; in some specimens the ocelli are hardly perceptible, and there are purplish and white patches near the apices of the wings.

Subdivision 2.

Posticæ subtus maculis mediis ocellaribus elongatis et irregularibus.

93. EUPTYCHIA CHLORIS.

Papilio chloris, Cramer, Pap. Exot. iv. pl. 293. f. A, B (1782).

Euptychia chloris, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 20 (1851).

Satyrus tolmnia, ♀, Godart, Enc. Méth. ix. p. 491. n. 48 (1819).

Euptychia chlorimene, Hübner, Verz. bek. Schmett. p. 54. n. 514 (1816).

Hab. Surinam (*Cramer*); Brazil; Bahia; Para. B.M.

Note.—Some specimens of this species have no ocellus on the underside of the front wings.

94. EUPTYCHIA HERSE.

Papilio herse, Cramer, Pap. Exot. i. pl. 10. f. C, D (1779).

Satyrus herseis, Godart, Enc. Méth. ix. pp. 465 & 495. n. 60 (1819).

Euptychia herseis, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 11 (1851).

Hab. Guiana (*Westwood*); Brazil; Venezuela; Para. B.M.

Var. *Alæ paulo majores, fasciis anticarum ad costam minime approximantibus, fasciis posticarum flavescentibus, ocellis magis elongatis.*

Hab. Para; Tapajos (*Coll. Bates and B.M.*).

95. EUPTYCHIA CALLICHLORIS, sp. n. (Pl. XL. fig. 10.)

Alæ supra fuscae, area basali pellucescente et violascente: anticæ fasciis duabus mediis obliquis fuscis, tertia harum externam approximante, lineisque duabus marginalibus fuscis indistinctis: pos-

ticæ fascia basali indistincta, altera media medio valde angulata, lineisque duabus marginalibus indistinctis fuscis; stria marginali ad angulum analem albicante; ocello subanali magno, nigro, ochreo cincto, aliisque indistinctis per alas conspicuis: corpus cinereo-fuscum, antennis fuscis ochreo acuminatis, subtus ferrugineis.

Alæ subtus albicantes: anticæ fasciis velut supra distinctioribus; ocello subapicali nigro, ochreo cincto, argenteo bipupillato: posticæ basi fusca, fascia media flavescente medio valde angulata, area apicali violaceo-cærulescente; margine apicali albicante, anali flavescente, margine ipso nigro lineis duabus marginalibus nigris; ocellis quinque submarginalibus fulvo-cinctis, secundo tertioque, et quarto quintoque iride una inclusis; apicali minimo, anali maximo, primo, secundo et quinto nigris argenteo bipupillatis, aliis argenteis elongatis: corpus albido-fuscum.

Exp. alar. unc. $1\frac{7}{8}$.

Hab. Ega (Coll. Bates).

Most closely allied to *E. herse*, but very distinct from all the neighbouring species.

96. EUPTYCHIA HEWITSONII, sp. n. (Pl. XL. fig. 4.)

♂. *Alæ supra area basali apud basim pellucida: anticæ fuscæ, area anali cærulea nitida, apud basim paulo virescente; ciliis albis: posticæ cæruleæ nitidæ, apud basim virescentes; ciliis albis: corpus cinereum, antennis cinereis.*

Alæ subtus albidæ violascentes, area apicali posticarum aliquando cærulea: anticæ fasciis duabus mediis, unaque submarginali ferrugineo-fuscis; tribus tenuibus marginalibus nigris; ocello subapicali nigro, argenteo pupillato ochreoque iridato: posticæ fasciis duabus mediis, externa sinuata et dentata, ferrugineis; una submarginali, apud apicem nigra, apud marginem internum rufescente, dilatata et mediam externam approximante; duabus marginalibus tenuibus nigris; ocellis quinque flavo cinctis, tertio et quarto argenteis elongatis, aliis nigris argenteo bipupillatis, quinto maximo: corpus cinereum.

Exp. alar. unc. $1\frac{5}{16}$.

♀. *Alæ supra fuscæ violascentes, lineis tribus marginalibus indistinctis fuscis: posticæ una intermedia ochrea, maculaque magna subanali nigra: corpus fuscum; antennis fuscis, ad apicem flavescenscentibus.*

Alæ subtus violaceæ roseæve, fasciis ocellisque velut maris: corpus albidum.

Exp. alar. unc. $1\frac{5}{16}$ — $1\frac{7}{16}$.

Hab. Para (Colls. Bates, Salvin, Hewitson, and B.M.).

Var. ♂. *Alæ supra virescentes, posticæ paulo elongatæ; subtus pallidiores paulo virescentes violascentesque.*

Hab. Ega.

B.M.

This is one of the most lovely little Butterflies in the genus, and not very closely allied to any other species that I have seen; in some respects it agrees with *E. chloris*.

97. EUPTYCHIA AGATHA, sp. n. (Pl. XL. fig. 8.)

♂. *Alæ anticæ supra fuscæ violascentes: posticæ cyaneæ, area costali fusca violascente: corpus fuscum, antennis flavo-ferrugineis.*

Alæ subtus pallidæ nitentes viridescentes, fasciis duabus mediis obliquis, externa posticarum medio angulata, unaque submarginali irregulari ad apicem coarctata, conjuncta: anticæ fascia submarginali indistincta fusca, altera marginem approximante unaque marginali fuscis; ocello subapicali nigro, ochreo cincto alboque pupillato: posticæ margine anali fusco, linea media marginali albida; ocellis quinque, primo, secundo et quinto nigris fulvo cinctis alboque pupillatis, aliis elongatis argenteis flavo cinctis, quinto maximo, primo minimo: corpus albidum.

Exp. alar. unc. 1 $\frac{5}{8}$.

♀. *Alæ supra violaceæ subpellucidæ, marginibus rufo-fuscis, lineis marginalibus velut in mari: subtus ocellis per alas conspicuis.*

Alæ subtus fasciis posticarum mediis, approximantibus: aliter velut in mari.

Exp. alar. unc. 1 $\frac{6}{8}$.

Hab. Para (Coll. Bates and B.M.).

This species is closely allied to *E. chloris*, Cramer. The male differs in having the outer margin of the front wings less sinuated, being of a duller and darker colour, with the hind wings longer and more broadly suffused with blue; on the underside the ocelli are larger and nearer to the outer margin, the second one being placed very near the margin, as in *E. herse*, Cramer; and the central bands are orange. The female is of a brighter colour above, with the marginal lines less distinct; below the differences are the same as in the male.

98. EUPTYCHIA TOLUMNIA.

Papilio toluumia, Cramer, Pap. Exot. ii. pl. 130. f. F, G (♂) (1779); Fabricius, Gen. Ins. ii. p. 85. n. 374 (1776); Ent. Syst. iii. pt. 1. p. 107. n. 330 (1793).

Euptychia toluumia, Hübner, Verz. bek. Schmett. p. 54. n. 513 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 19 (1851).

Satyrus toluumia, Godart, Enc. Méth. ix. pp. 464 & 491. n. 48 (1819).

Hab. Guiana; Bahia (Westwood; Coll. Hewitson).

The specimen referred to in the 'Genera' as in the British Museum is probably the female of *chloris*, which, however, is not the insect intended by Cramer; his figure more nearly resembles *E. agatha*, but is quite distinct from it.

99. EUPTYCHIA AYAYA, sp. n. (Pl. XL. fig. 11.)

Alæ supra cærulescentes, apud marginem violascentes; margine ipso nigro, linea marginali alteraque submarginali indistinctis fuscis: posticæ macula magna ad cellæ finem nigra: corpus olivaceo-fuscum; antennis flavo-fuscis, subtus flavis.

Alæ subtus argenteo-cæruleæ, fasciis duabus mediis obliquis oliva-

ceis; *marginē externo tenuissime nigro*; *linea marginali alteraque submarginali olivaceo-fuscis, anticis apud costam undulatis, posticis angulis alternis*: *antica fascia apud marginem olivacea purpurascente*; *ocello subapicali nigro, ochreo cincto argenteoque pupillato*: *posticæ ocellis quinque fusco circumcinctis, primo, secundo et quinto nigris fulvo cinctis et argenteo bipupillatis, tertio et quarto piriformibus violaceo-argenteis et flavo cinctis*: *corpus ochreo-albidum*.

Exp. alar. unc. $2\frac{1}{8}$.

Hab. Tapajos (*Coll. Bates*).

100. EUPTYCHIA TRICOLOR.

Euptychia tricolor, Hewitson, *Ann. & Mag. Nat. Hist.* vi. p. 440 (1850); Westw. & Hewits. *Gen. Diurn. Lepid.* p. 373. n. 15, pl. 65. f. 3 (1851).

Hab. ♂, Tapajos; Fonteboa.

B.M.

♀, Tapajos (*Coll. Bates*).

This is one of the most distinct and beautiful species of *Euptychia*: specimens from Fonteboa are even more exquisite in colouring than the one figured in the 'Genera'; they have a broad ill-defined subcostal streak of metallic blue green in the front wings. The only specimens of the female of this insect which I have seen are in Mr. Bates's collection; they are very similar to the females of *E. chloris*.

101. EUPTYCHIA BATESII, sp. n. (Pl. XL. fig. 16.)

♂. *Alæ supra fuscæ, omnino viridi purpureoque micantes*: *corpus olivaceo-fuscum*; *antennis supra fuscis, albido fasciolatis, præ flavescentibus, nigro acuminatis, subtus flavis nigro acuminatis*.

Alæ subtus albidæ, minime roseo micantes, fasciis duabus mediis obliquis rubris; *fascia lata apud marginem posticum fusca, ocellos includente*; *linea submarginali fusca, anticarum apud apicem angulis alternis undata, posticarum undata*; *lineis duabus marginalibus fuscis, posticarum undulatis*: *antica ocello uno subapicali nigro, fulvo cincto argenteoque pupillato, punctisque duobus minimis intersectis argenteis*: *posticæ ocellis quinque fulvo cinctis, primo, secundo et quinto nigris argenteo pupillatis, primo minimo, quinto maximo et bipupillato, tertio et quarto ferreo-argenteis iridibus fusco conspurcatis*: *corpus ochreo-fuscum*.

Exp. alar. unc. $2\frac{5}{16}$.

Hab. Tapajos (*Coll. Bates and B.M.*).

♀. *Alæ supra pallidæ violascentes, lineis marginalibus distinctis*: *posticæ macula subanali ovali nigra brunneo cincta*.

Hab. Tapajos (*Coll. Bates*); Para (*Coll. Salvin*).

The female of this species bears a strong general resemblance to our variety of *E. ocypete*, and even more closely resembles *E. helle*, but may be at once distinguished from these by the form and position of the central bands, which in *E. ocypete* and *E. helle* are rather nearer to the outer margin; the central ocelli also are bipupillate in these two species.

102. EUPTYCHIA NORTIA.

Euptychia nortia, Hewitson, Exot. Butterf. iii. pl. 44. n. 2. f. 2 (1862).

Hab. Tapajos.

B.M.

103. EUPTYCHIA GERA.

Euptychia gera, Hewitson, Ann. & Mag. Nat. Hist. vi. p. 439 (1850); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 4. pl. 63. f. 4 (1851).

Hab. Tapajos (*Colls. Bates and Hewitson*).

104. EUPTYCHIA METAGERA, sp. n.

Alæ supra fuscæ, medio albicantes, fasciis duabus mediis indistinctis fuscis; lineis tribus marginalibus nigro-fuscis: posticæ macula subapicali nigro-fusca, alteraque ocellata subanali per alas conspicua: corpus cinereo-fuscum; antennis supra fuscis, præ flavescenscentibus et ad apicem fusco fasciolatis, subtus basi cinereis præ flavis.

Alæ subtus pallidiores, area apicali roseo tincta; fasciis velut supra, sed distinctioribus: posticæ ocellis sex flavo cinctis, primo, secundo, quinto et sexto nigris argenteo pupillatis, primo et sexto minimis, quinto maximo, tertio et quarto argenteis elongatis: corpus fuscum pallidum.

Exp. alar. unc. 1 $\frac{5}{8}$.

Hab. Upper Amazon (*Coll. Bates*).

Allied to *E. gera* and *E. nortia*.

105. EUPTYCHIA HIEMALIS, sp. n.

Alæ supra niveæ, costa et margine postico anticarum fuscis, lineis tribus marginalibus indistinctis fuscis: posticæ lineis tribus marginalibus, maculis duabus apicalibus unaque subanali fuscis: corpus fuscum; antennis supra cinereis albo fasciolatis, præ flavescenscentibus, subtus flavis præ nigrescentibus.

Alæ subtus niveæ, fasciis duabus mediis, anticarum brevibus, externa medio angulata, externa posticarum ad angulum internum irregulari; costæ apiceque anticarum fuscescentibus; lineis tribus marginalibus fuscis, posticis undulatis: posticæ ocellis sex fulvo cinctis, primo, secundo, quinto et sexto nigris albo pupillatis, aliis ovalibus argenteis: corpus thorace fusco, abdomine albido.

Exp. alar. unc. 2.

Hab. River Amazon; Rio Negro (*Coll. Bates*).

B.M.

Allied to *E. nortia*, Hewitson; but at first sight it might appear to be only an extreme variety of *E. ocirrhoë*.

Division V.

Alæ supra fuscæ, aliquando parte albida: subtus maculis ocellaribus diverse formatis, aliquando piriformibus; quandoque sparsis, argenteis, macula magna subanali nigra; rarius mediis, elongatis; aut marginalibus, nigris argenteisque.

Subdivision 1.

Ocellis subtus piriformibus.

106. EUPTYCHIA FURINA.

Euptychia furina, Hewitson, Exot. Butterf. iii. pt. 44. n. 4 (1862).*Hab.* Tapajos.

♂, B.M.

Mr. Hewitson, at the end of his description of this species, suggests the possibility of *E. itonis* and *E. furina* being merely sexually distinct. I cannot agree with him in this particular, as we have female insects very much more nearly allied to *furina*, such as *E. gemmula*; but even these are so unlike *furina* and its male allies that I should not dare to place them together without some proof of their identity.

Swainson says of his *Satyrus argenteus*, an insect allied to *itonis*, "the two sexes are perfectly similar."

107. EUPTYCHIA JUNONIA, sp. n.

♂. *Alæ anticæ elongatæ, margine postico angulo medio, concavato; alæ supra fuscae immaculatæ, posticæ lineis tribus marginalibus nigro-fuscis duabusque intermediis pallidis: corpus cinereo-fuscum; antennis supra cinereis, subtus flavescens, fascia subapicali nigra.*

Alæ subtus cinereo-fuscae, fasciis duabus mediis, posticarum valde irregularibus fuscis, interna posticarum marginis interni medium vix attingente, externa ocello sexto interrupta; aliter velut in E. furina, ocellis autem paulo minoribus, linea submarginali valde undulata, marginalibusque tenuibus: corpus ochreo-cinereum.

*Exp. alar. unc. 2.**Hab.* Tapajos.

B.M.

Closely allied to *E. furina*, Hewitson, but quite distinct.

108. EUPTYCHIA GEMMULA, sp. n.

Neonympha gemmula, E. Doubleday, List Lep. Brit. Mus. App. p. 33 (1847); Westw. & Hewits. Gen. Diurn. Lepid. p. 375. n. 9 (1851).

Alæ supra fuscae, margine postico fuscescente: posticæ area anali paulo dilutiore, maculis una duabusve apud disci medium nigro-fuscis; lineis duabus maris nigro-, fæminæ ferrugineo-fuscis, et margine ipso fusco: corpus thorace cinereo præ rufescente; abdomine fusco; antennis cinereis, subtus albido fasciolatis.

Alæ subtus pallidiores, fasciis duabus mediis ferrugineis tenuibus, anticarum subdirectis, late separatis, irregularibus, posticarum obliquis; lineis duabus marginalibus, angulis alternis undulatis, anticarum fuscis, posticarum ferrugineis; margine ipso nigro tenuissimo, ciliis cinereis: posticæ ocellis maris quinque, fæminæ sex, ovalibus nigris late fulvo cinctis, secundo et quinto extus nigris, intus viridi-argenteis, aliis viridi-argenteis: corpus cinereo-fuscum.

*Exp. alar. unc. 2.**Hab.* ♂, Rio Janeiro (Coll. Bates); ♀, Brazil.

B.M.

Allied to the preceding species.

109. EUPTYCHIA DOXES.

Satyrus doxes, Godart, Enc. Méth. ix. pp. 465 & 493. n. 54 (1819).

Euptychia doxes, Westw. & Hewits. Gen. Diurn. Lepid. p. 374. n. 28 (1851).

"Alis cærulescenti-fuscis : subtus strigis duabus ferrugineis : posticis ocellis quinque ovatis et intus argenteo pulverulentis."

"A little more than $1\frac{1}{2}$ inch in expanse. The wings brown, bluish in some parts; the upperside of the hind wings has near the anal angle a large blackish spot, and near the outer margin, which is more or less dentated, a double sinuated line, uniformly blackish. Below, each wing has a similar marginal line; and three ferruginous undulated transverse lines may be seen, the outer one separated from the others, but only on the hind wings, by a row of five oval ocelli, the second, third, and fourth very large; these ocelli, which are surrounded by an iris of orange, are black towards the outer margin of the wing, brown, and covered with silver atoms towards the base. The body is of the same colour as the wings; the antennæ are annulated with brown and white; the club reddish, with its point black."—*Enc. Méth.*

Hab. Brazil.

This species appears to be allied to *E. gemmula*, but differs in size and in several other more important particulars.

110. EUPTYCHIA ERYCINA.

♂. *Alæ supra fuscæ : posticæ area basali pallidiore, apud apicem albescentes ; maculis quatuor submarginalibus nigris, una ad apicem parva, aliis subanalibus, media majore ; lineis tribus marginalibus nigro-fuscis, media lata : corpus cinereo-fuscum ; antennis supra cinereis, subtus ferrugineis.*

Alæ subtus fuscæ, posticæ cinereo-albescentes ; lineis duabus mediis, anticarum subdirectis, externa valde irregulari, ab oculo sexto posticarum interrupta, lineis tribus marginalibus velut in E. furina undatis : posticæ ocellis sex, extus nigris, intus argenteis ; quinto maximo, primo sextoque minimis : corpus cinereo-fuscum.

Exp. alar. unc. 2.

Hab. Brazil.

B.M.

Allied to *E. junonia*, but very different.

111. EUPTYCHIA LATIA, sp. n. (Pl. XL. fig. 14.)

♀. *Alæ supra fuscæ : posticæ macula permagna subapicali ochrea ; maculis quatuor submarginalibus nigris, secunda quartaque minimis ; linea lunulata submarginali ochrea : corpus cinereo-fuscum ; antennis supra fuscis, subtus ferrugineis.*

Alæ subtus fuscæ, area apicali posticarum albicante ; lineis mediis velut in E. erycina sed latius separatis externaque minus sinuata ; lineis marginalibus velut in E. erycina, margine ipso posticarum fusco : posticæ ocellis sex ovalibus fulvo cinctis, primo, secundo,

quinto et sexto nigris, intus argenteis, aliis argenteis valde elongatis: corpus fuscum.

Exp. alar. unc. $1\frac{3}{4}$.

Hab. Bahia.

B.M.

Allied to the preceding species.

Subdivision 2.

Ala subtus maculis occllaribus sparsis argenteis, macula magna subanali nigra, maculas argenteas includente.

112. EUPTYCHIA COSMOPHILA.

(*Oreas fimbriata*) *Neonympha cosmophila*, Hübner, Ex. Schmett. Zutrage, nos. 255, 256 (♂) (1806).

Neonympha cosmophila, Westw. & Hewits. Gen. Diurn. Lepid. p. 375. n. 15 (1851).

Satyrys argenteus, Swainson, Zool. Ill. vols. i.-iii. pl. 159 (♀) (1820-23); Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 8 (1851). *E. pagyris*, syn.

Hab. Brazil; Bahia.

B.M.

I think there can be little doubt that the above insects are sexes of one species, they only differ in depth of colour.

113. EUPTYCHIA PAGYRIS.

Satyrys pagyris, Godart, Enc. Méth. ix. pp. 464 & 491. n. 46 (1819).

Euptychia pagyris, Westw. & Hewits. Gen. Diurn. Lepid. p. 373. n. 8 (1851).

"Alis supra fuscis: subtus strigis duabus ferrugineis undatis; posticis basi griscentibus, tunc flavescenibus, maculis argenteis nigraque bipunctata.

"Expanse about $1\frac{1}{2}$ inch. The upperside brown, somewhat dark. The front wings entire and without spots; the hind wings dentated, whitish towards the anal angle, with a series of three black spots, the middle one very large.

"The underside of the front wings is the same colour as above, with two ferruginous lines, transverse and waved, independent of which there is along the outer margin a series of nine or ten silver spots, rather brilliant. The underside of the hind wings is greyish towards the base, with two ferruginous lines, being a continuation of those in the front wings; becoming yellow towards the apex, with seven silver spots, five of them somewhat globose, placed parallel to the outer margin; the two others, especially the one near the interior margin, elongated and touching the ferruginous line; between the fourth and fifth globose spots there is a large oval black one placed transversely and enclosing two large silver spots; upon the outer margin, which is of the same grey as the base, is a double blackish flexuous line."—*Enc. Méth.*

Hab. Brazil (Coll. Hewitson).

E. pagyris differs from *E. cosmophila* in being larger, with the

black spots in the hind wings on the upperside more distinct, and placed much further from the margin, they also do not slant downwards towards the anal angle. The underside differs in having the elongate ocellate spots pupillated with silver spots and lunules, and encircled by an interrupted brown line; the central bands reddish, the inner one straight, the outer one curved outwardly; the marginal lines distinct, black, and bisinuate between each two nervures. The hind wings have the central bands reddish, placed nearer to one another, the outer one with zigzag waves; the basal half brownish; the apical half broader and distinct from the outer central line; and all the markings more defined; the wings with long cilia, and the hind wings deeply sinuated.

114. EUPTYCHIA ITONIS.

Euptychia itonis, Hewitson, Exot. Butterf. iii. pt. 44. f. 3 (1862).
Hab. Para; Ega (*Coll. Salvin*). B.M.

115. EUPTYCHIA CLORIMENA.

Papilio clorimena, Stoll, Suppl. Cramer, Pap. Exot. p. 60, pl. 13. f. 2, 2 b (1791).

Neonympha clorimene, Herrich-Schäffer, Ind. Lep. Exot. p. 59. n. 12 (1864).

Neonympha clerimene, Hübner, Verz. bek. Schmett. p. 65. n. 624 (1816); Westw. & Hewits. Gen. Diurn. Lepid. p. 375. n. 16 (1851).

Hab. Surinam.

The arrangement of the silver spots on the underside in this species appears to be almost the same as in *E. pagyris*.

116. EUPTYCHIA SALVINI, sp. n. (Pl. XL. fig. 13.)

Alæ supra fuscae pallidae, area apicali posticarum albicante, lineisque duabus nigris: corpus cinereum, antennis ferrugineis.

Alæ subtus albidæ; alæ omnes fascia basali obliqua brevi, duabus mediis subintegris minus obliquis, anticæque fasciæ ovali, maculas tres serie contigua positas argenteoque atomatas includente, fuscis; margine postico anticarum lineis duabus nigris submarginato: posticæ area apicali flava fusco marginata, maculas quinque subapicales argenteas, duas apicales intus nigro punctatas ocellosque tres subanales argenteos late nigro cinctos includente, ocello externo maximo globoso, aliis parvis elongatis; lineis duabus marginalibus et margine ipso nigris: corpus albido-fuscum.

Exp. alar. unc. $1\frac{5}{8}$.

Hab. Panama (*Coll. Salvin*).

Allied to *E. itonis*, but very dissimilar in pattern.

Subdivision 3.

Alæ subtus maculis ocellaribus elongatis, mediis argenteo atomatis.

117. EUPTYCHIA AREOLATA.

Papilio areolatus, Smith & Abbot's Lep. Georgia, p. 25, t. 13 (1797).

Satyrus areolatus, Godart, Enc. Méth. ix. pp. 465 & 494. n. 58 (1819); Boisd. & Leconte, Icon. Léop. Am. Sept. pl. 63. figs. 5 & 6, 7 & 8 (metam.) (1833).

Neonympha areolatus, Westw. & Hewits. Gen. Diurn. Lepid. p. 375. n. 6 (1851).

Oreas (fimbriata) helicta, Hübner, Samml. exot. Schmett. Bd. i. pl. 95 (1806).

Neonympha helicta, Hübner, Verz. bek. Schmett. p. 65. n. 622 (1816).

Hab. Georgia, United States.

Var. *Alæ anticæ subtus immaculatæ, posticæ ocellis quatuor vel quinque elongatis, tribus mediis longioribus.*

Papilio phocion, Fabricius, Ent. Syst. iii. pt. 1. p. 218. n. 683 (1793).

Satyrus phocion, Godart, Enc. Méth. ix. pp. 465 & 494. n. 59 (1819).

Neonympha phocion, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 6 (1851).

Hab. United States.

B.M.

This species is exceedingly variable in marking, as the following list of the number of ocellate spots in the various figures and descriptions will show :—

Smith & Abbot's 'American Insects,' f. w. 4, h. w. 6.

Godart, 'Encyclopédie Méthodique,' f. w. 4, h. w. 6.

Hübner, 'Sammlung exotischer Schmetterlinge,' f. w. 2-3, h. w. 5.

Boisduval et Leconte, 'Histoire des Lépidoptères,' f. w. 1, h. w. 4.

Fabricius (*E. phocion*), 'Entomologia Systematica,' f. w. 0, h. w. 3.

Coll. Brit. Mus. (*E. phocion*), three specimens, f. w. 0, h. w. 4-5.

The figure of this species given by Dr. Boisduval appears to have been badly coloured; it does not agree in tint with any of the other figures or with our specimens.

Subdivision 4.

Alæ subtus maculis ocellaribus marginalibus, nigris argenteisque.

118. EUPTYCHIA PYRACMON, sp. n.

♀. *Alæ supra fuscæ, linea post alarum medium posita fusca, extus rubro marginata, anticarum subintegra, posticarum lunulata: anticæ margine postico paulo fuscescente, ciliis cinereis: posticæ margine apicali paulo fuscescente, margine anali rufescente, maculis tribus submarginalibus nigris, interna minima: corpus cinereo-fuscum; antennis supra fuscis, subtus albidis, præ flavescentibus, cinereo fasciolatis.*

Alæ subtus ochreæ cinereo variæ, fasciis duabus mediis irregularibus ferrugineis: anticæ linea submarginali undulata apicem non attingente: posticæ linea submarginali lunulata argentea, apud marginem analem intus ferrugineo marginata, ad apicem maculas

duas binas argenteas formante, maculis duabus mediis marginalibus nigris, macula permagna subanali cinerascens: corpus ochreo-cinereum.

Exp. alar. unc. $1\frac{1}{6}$.

Hab. Oajaca (Mexico).

B.M.

Closely allied to *E. gemma*, from which it differs in being much larger, having the apex of the front wings subangulated and the outer margin of the hind wings sinuated; the wings above reddish in some parts, with much larger marginal black spots; below, the central streaks are more distinct, reddish, and different in outline.

119. EUPTYCHIA GEMMA.

Neonympha gemma, Hübner, Exot. Schmett. Zutr. f. 7, 8 (1806); Westw. & Hewits. Gen. Diurn. Lepid. p. 375. n. 8 (1851).

Satyrus gemma, Boisduval et Leconte, Hist. des Lép. pl. 62. f. 1-3, 4 & 5 (metam.) (1833).

Hab. United States; Polochie Valley (*Coll. Salvin*).

B.M.

Division VI.

Alæ supra fuscae immaculatæ; anticæ subtus plerumque immaculatæ; posticæ ocellis nigris sæpius ovalibus, atomis argenteis pupillatis.

120. EUPTYCHIA SAUNDERSII, sp. n. (Pl. XL. fig. 17.)

Alæ supra fuscae, lineis duabus marginalibus valde indistinctis: corpus cinereo-fuscum, antennis ferrugineis.

Alæ subtus pallidiores, violascentes, area apicali posticarum virescente vel violascente, lineis duabus mediis fuscis, ad costam anticarum divergentibus, externa posticarum medio angulata, margine tenuissime fuscescente, linea marginali tenui alteraque submarginali fuscis: posticæ ocellis quinque ovalibus et rarissime uno minimo apicali, primo et quinto minoribus, nigris, brunneo cinctis, fusco circumcinctis et atomis argenteis pupillatis: corpus cinereo-fuscum.

Exp. alar. unc. $2\frac{1}{4}$.

Hab. Ega (*Coll. Bates*); Pernambuco.

B.M.

Closely allied to *E. pacarus*, but apparently differing in the position of the lines below, and in size.

121. EUPTYCHIA MIMA, sp. n.

Præcedenti simillima, sed minor, lineis mediis subtus ad costam anticarum magis approximantibus, externa posticarum medio excavata: anticæ oculo purvo apicali: posticæ paulo violascentes, ocellis sex minoribus marginem approximantibus.

Exp. alar. unc. $1\frac{1}{6}$.

Hab. Tapajos (*Coll. Bates*).

Very like the preceding species, from which it differs in being much smaller, with the lines below differently formed, and the ocelli smaller and nearer to the outer margin.

122. EUPTYCHIA FUMATA, sp. n.

In the collection of W. C. Hewitson.

Very similar in general aspect to *E. saundersii*.

123. EUPTYCHIA PACARUS.

Satyrus pacarus, Godart, Enc. Méth. ix. pp. 465 & 495. n. 61 (1819).

Neonympha pacarus, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 4 (1851).

“*Alis integris, nigricanti-fuscis, supra immaculatis: subtus anticis strigis duabus obscurioribus undatis, posticis tribus, ocellisque quinque atomis pupillaribus argenteis.*”

“About 2 inches in expanse. Wings entire, brown, blackish in some parts; upperside without spots. Underside, near the margin, with two lines darker than the ground-colour; the hind wings have a third similar line, placed transversely towards the middle, and separated from the others by a row of five round ocelli, very black, with a pupil formed of silver atoms, and a brownish iris surrounded by a darker circle; the front wings have no ocelli.”—*Enc. Méth.*

Hab. Brazil.

124. EUPTYCHIA INSIGNIS, sp. n. (Pl. XL. fig. 12.)

Alæ supra fuscae, linea marginali alteraque submarginali valde indistinctis; posticæ oculo subanali, per alas conspicuo: corpus fuscum, antennis fuscis.

Alæ subtus pallidiores: anticæ lineis duabus velut supra fuscis aliaque brevi interrupta indistincta post cellam oblique posita: posticæ medio albicantes; lineis duabus ante alarum medium oblique positis, interna apud marginem internum paulo undulata, externa minime irregulari; linea marginali alteraque submarginali undatis; ocellis tribus discalibus serie recta positis, argenteis, nigro cinctis ochreoque promiscue circumcinctis, medio maximo: corpus pallidum.

Exp. alar. unc. $1\frac{5}{16}$.

Hab. — (Coll. Bates).

This species may be allied to *E. nortia*, but only agrees with it in a few particulars of coloration.

I am told that the following species has been mistaken for the *antonœ* of Cramer, with which it has no connexion whatever.

Division VII.

Alæ anticæ margine postico excavato; posticæ margine postico subdirecto, angulo anali distincto: supra fuscae, subtus margine postico albicante, ocellis posticarum lunulis pupillatis.

125. EUPTYCHIA ERICHTHO, sp. n. (Pl. XL. fig. 15.)

Alæ supra fuscae, anticæ lineis duabus, posticæ tribus marginalibus fuscis: corpus fuscum; antennis supra fuscis, subtus ferrugineis.

Alæ subtus pallidiores, margine postico violaceo-albicante; lineis duabus mediis, interna apud costam intus currente, fuscis; lineis duabus marginalibus nigris tenuibus, unaque submarginali, anticarum irregulari, posticarum sinuata: antica ocellis fuscis medio nigris, pupillis violaceo-argenteis, ochreo cinctis et fusco circumcinctis: posticæ ocellis sex similibus, pupillis plerumque lunulatis: corpus fuscum.

Exp. alar. unc. $1\frac{1.5}{16}$.

Hab. Pernambuco, Rio, Ega, Para (B.M.); Ega (Colls. Bates and Salvin).

126. EUPTYCHIA ARCHEBATES.

Satyrus archebates, Ménétriés, Nouv. Mém. Soc. Nat. Moscou, iii. p. 38.

Euptychia archebates, Westw. & Hewits. Gen. Diurn. Lep. p. 374. n. 25 (1851).

Hab. Antilles.

The book in which this insect was described was, I am told, destroyed in the great fire at Moscow; and I am therefore unable to determine the species.

The following species probably do not belong to this genus:—

127. PAPILIO FLORIMEL.

Papilio florimel, Fabricius, Ent. Syst. iii. 1. p. 215. n. 673 (1793); Donovan's Drawings in Bibl. Hope. Oxford.

Satyrus florimel, Godart, Enc. Méth. ix. pp. 469 & 512. n. 106 (1819).

Neonympha florimel, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 19 (1851).

Hab. —?

From the description given by Fabricius I should suppose this insect to be an *Erebia*; I have, however, had no opportunity of seeing Donovan's drawings, and may therefore be mistaken. I know of no species of *Euptychia* anything like it.

128. PAPILIO PERIBÆA.

Papilio peribæa, Fabricius, Ent. Syst. iii. 1. p. 234. n. 730 (1793).

Neonympha peribæa, Westw. & Hewits. Gen. Diurn. Lep. p. 376. n. 24 (1851).

Satyrus peribæa, Godart, Enc. Méth. ix. pp. 463 & 486. n. 29 (1819).

Hab. Surinam (*Fabricius*).

If it were not for the locality, I should have imagined this insect, from the description, to be a *Mycalesis*. I do not know of any species of *Euptychia* with a large ocellus at the inner margin of the front wings on the upperside.

129. PAPILIO HALYMA.

Papilio halyma, Fabricius, Ent. Syst. iii. p. 243. n. 758 (1793).

Satyrus halyma, Godart, Enc. Méth. ix. pp. 463 & 487. n. 32 (1819).

Neonympha halyma, Westw. & Hewits. Gen. Diurn. Lep. p. 376. n. 25 (1851).

Hab. in Indiis (*Fabricius*); West Indies (*Westwood*).

This species may be a *Debis*. I believe that *Fabricius* occasionally uses the locality "in Indiis" instead of "in India."

130. PAPILIO CANTHUS.

Papilio canthus, Linnæus, Syst. Nat. ii. p. 768. n. 129 (1766); *Fabricius*, Ent. Syst. iii. pt. 1. p. 157. n. 484 (1793).

Satyrus canthus et cantheus, Godart, Enc. Méth. ix. pp. 465 & 493. nos. 55, 56 (1819).

Neonympha canthus, Westw. & Hewits. Gen. Diurn. Lep. p. 375. n. 13 (1851).

Papilio eurydice, Linn. Amœn. Acad. vi. p. 406 (Centuria Insectorum) n. 65 (1789).

Hab. United States.

B.M.

This species appears to me to be allied to *Lasiommata dejanira* (Europe); it bears a strong resemblance to *Debis portlandia* (United States).

Linnæus, in his 'Systema Naturæ' (1766), briefly characterizes this species, and refers for a fuller description of it to the 'Amœnitates Academicæ,' published in 1749. *Fabricius* refers to *P. arganthe* (sic), Cramer, i. pl. 17. t. 204. f. C, D, as his species. This figure, however, does not at all agree with his description.

The following species does not belong to the genus *Euptychia*, but is identical with *Chionobas bore*, Oechsenheim. See *Fabricius*'s type in the Banksian Collection:—

131. PAPILIO POLIXENES.

Papilio polixenes, *Fabricius*, Ent. Syst. iii. 1. p. 152. n. 466 (1793).

Neonympha? polixenes, Westw. & Hewits. Gen. Diurn. Lepid. p. 376. n. 22 (1851).

Hab. North America (*Coll. Banks*).

B.M.

EXPLANATION OF PLATES XXXIX., XL.

PLATE XXXIX.

Fig. 1. *Euptychia terrestris*, p. 462.

2. — *usitata*, p. 463.

3. — *picria*, p. 463.

4. — *austera*, p. 464.

5. — *erigone*, p. 466.

6. — *eriphule*, p. 468.

7. — *electra*, p. 468.

8. — *variabilis*, p. 469.

9. — *affinis*, p. 469.

10. — *ambigua*, p. 472.

11. — *huebneri*, p. 473.

Fig. 12. *Euptychia atalanta*, p. 474.

13. — *undulata*, p. 475.

14. — *binalinea*, p. 475.

15. — *coüs*, p. 477.

16. — *pharella*, p. 478.

17. — *harmonia*, p. 478.

18. — *phincus*, p. 478.

19. — *saturnus*, p. 479.

20. — *vesta*, p. 479.

21. — *palladia*, p. 461.

22. — *enyo*, p. 480.

PLATE XL.

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| Fig. 1. <i>Euptychia marmorata</i> , p. 471. | Fig. 10. <i>Euptychia callichloris</i> , p. 490. |
| 2. — <i>pilata</i> , p. 483. | 11. — <i>ayaya</i> , p. 492. |
| 3. — <i>divergens</i> , p. 464. | 12. — <i>insignis</i> , p. 501. |
| 4. — <i>hewitsonii</i> , p. 491. | 13. — <i>salvini</i> , p. 498. |
| 5. — <i>cælestis</i> , p. 484. | 14. — <i>latia</i> , p. 496. |
| 6. — <i>urania</i> , p. 484. | 15. — <i>erichtho</i> , p. 501. |
| 7. — <i>gigas</i> , p. 486. | 16. — <i>batesii</i> , p. 493. |
| 8. — <i>agatha</i> , p. 492. | 17. — <i>saundersii</i> , p. 500. |
| 9. — <i>brixiola</i> , p. 483. | |

14. Catalogue of Longicorn Coleoptera collected in the Island of Penang by James Lamb, Esq. By FRANCIS P. PASCOE, F.L.S., F.Z.S., &c., late Pres. Ent. Soc.

(Part II.)*

(Plates XLI., XLII., XLIII.)

CERAMBYCIDÆ.

LEPTURINÆ.

CAPNOLYMMA.

Capnolymma, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 265.

CAPNOLYMMA STYGIUM, Pascoe, *op. cit.* p. 266.

This insect has also been taken in Borneo, flying at sunset, by Mr. Wallace, and in Java by Dr. Horsfield.

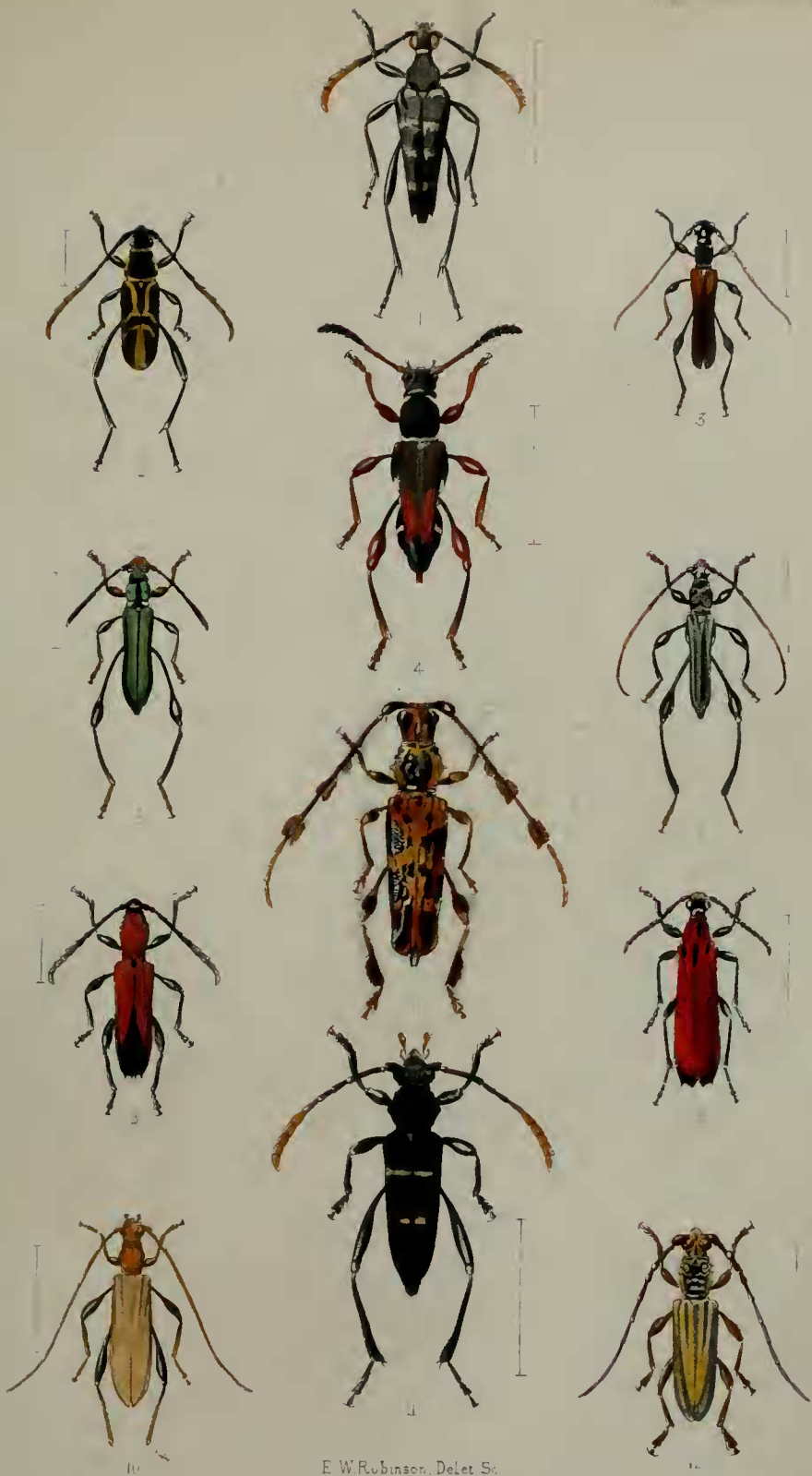
CAPNOLYMMA CAPREOLA. (Pl. XLII. fig. 1.)

C. testaceo-brunneum, *pube grisescente tectum*; *humeris apice rotundatis*.

Pale testaceous brown; head and prothorax darker, with a coarse pale grey pile; head narrowly elongate, very pubescent except behind the eyes; prothorax scarcely constricted behind the anterior margin, the lateral tooth prominent, disk covered with glossy black granules, the pubescence forming two lines united anteriorly but diverging behind; scutellum subscutiform but rounded posteriorly, covered with a dense yellowish pubescence; elytra truncate at the apex, not apiculate, closely punctured, each puncture with a setiform hair crossing it longitudinally; body beneath and legs pale testaceous, finely pubescent; antennæ much longer than the body, the basal joint slightly clavate. Length 6 lines.

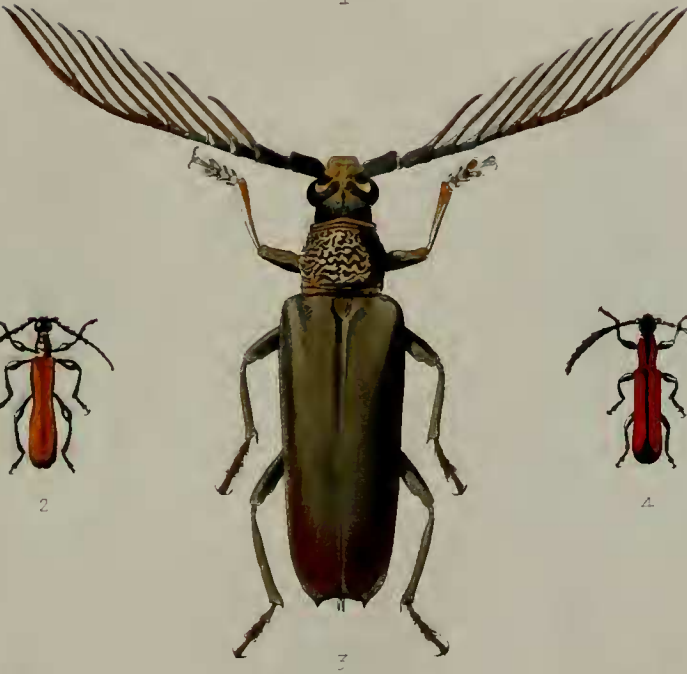
A well-marked species, differing in size, colour, and certain structural points—notably in the rounded apex of the shoulder, not produced into a sharp tooth-like process as in *C. stygium*. The genus

* For Part I. see *anteà*, p. 222.



E. W. Robinson. Delet. Sc.





E. W. Robinson Del et Sc.





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4



5



6

F.W. Robinson, Del.



is allied to *Leptura*, but is distinguished by several important characters, such as the elongate-ovate, not truncate, terminal joints of the palpi, the large facets of the eyes, the long basal joint of the antennæ and its insertion considerably anterior to the eye—thus making a very important step towards the curculionid type, and a very marked departure from its own. The anterior coxæ are scarcely conical or elongate, but are inserted into their largely angulated cotyloid cavities something after the manner of the *Prionidæ*.

ASILARIS.

Caput ante oculos angustatum, productum.

Antennæ basi approximatae, apicem versus lateraliter dilatatae, scapo breviusculo.

Palpi maxillares articulo ultimo elongato-ovato.

Femora in medio incrassata.

Head constricted directly behind the eyes, narrowed and produced anteriorly. Eyes nearly entire, very prominent, the facets very minute. Antennæ shorter than the body, inserted between the eyes, the scape rather short and slender; third joint longest; fifth at the apex and succeeding joints gradually unilaterally dilated from the base; the last notched and simulating an additional joint. Maxillary palpi slender, lengthened, the last joint elongate-ovate; labial palpi short, truncate. Prothorax subobconical, its posterior angles produced, the base bisinuate. Elytra gradually attenuated. Legs unequal, the posterior longest; femora thickened in the middle; tarsi of the anterior and intermediate pair with the basal joint dilated in the male, of the anterior only in the female; basal joint of the posterior tarsi long and compressed in both sexes. Anterior coxæ stout, subconical or subcylindrical. Abdomen slender, imperfectly covered by the elytra.

Nearly allied to *Ocalemia*; but in that genus the maxillary palpi are truncate, the posterior femora elongate and linear, and the antennæ have the joints longer and only partially dilated towards their apices. Both genera, owing to the structure of the prothorax, are nearer *Strangalia* than *Leptura*.

ASILARIS ZONATUS. (Pl. XLI. fig. 1.)

A. ater; elytris quadrifasciatis, fascia postica flavescente, alteris albis; antennis articulis ultimis sex ochraceis.

Deep black, very slightly pubescent, except the four coloured bands on the elytra, and exceedingly closely and minutely punctured; muzzle rather glossy about the mouth; palpi and maxillary lobes dull testaceous; prothorax rather longer than broad, considerably narrowed at the apex; scutellum exactly triangular, and having the white basal band of the elytra continuous across its whole surface; elytra obliquely truncate at the apex, the outer angle very acute, the basal and two median bands white, the præapical yellowish; body beneath with a scanty silvery white pubescence; antennæ with the last six joints ochraceous. Length 7 lines.

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EPHIES.

Antennæ basi subremotæ, dilatatæ.

Oculi prominuli, fere integri.

Femora simplicia, basi paulo angustiora.

Elytra parallela.

Head constricted a little behind the eyes, moderately produced anteriorly. Eyes prominent, nearly entire, with minute facets. Antennæ much shorter than the body, rather remote at the base, inserted between the eyes; the scape short, obconical, slightly curved; the third joint much larger and longer, and with the following dilated, principally on one side; the last joint entire. Palpi small, the last joint of the maxillary elongate and truncate. Prothorax shortly subconical, its posterior angles produced, the base bisinuate. Elytra elongate, their sides nearly parallel. Legs unequal, the posterior longest; femora not clavate; basal joint of the anterior tarsi short, of the intermediate and posterior elongate. Anterior coxæ conical. Abdomen stout, embraced by the elytra.

In habit similar to *Euryptera*, a genus with which it might almost be conjoined, but for its antennæ. The type, described below, is by far the broadest of the four species (all new) now before me.

EPHIES CRUENTUS. (Pl. XLI. fig. 9.)

E. ater, elytris, apice excepto, prothoraceque, vitta mediana excepta, læte sanguineis; prothoracis lobo prope scutellum emarginato.

Black, body beneath and legs glossy, elytra and prothorax bright blood-red, except at the apex of the former and a median stripe on the latter; head covered with a short woolly pubescence, a pale brownish spot on the forehead and two on the neck; palpi and upper lip pitchy black; prothorax slightly angular at the side, the base strongly bisinuate, the middle lobe broadly emarginate; scutellum narrowly elongate and triangular; elytra closely covered with a very shaggy pubescence, the sides incurved but rounded towards the apex, a slightly impressed line along the middle of each, the apex emarginate; antennæ about half the length of the body, dull black. Length 6 lines.

There is a true *Leptura* in the collection, belonging to a small section of the genus, differing principally in coloration, and of which I have two more undescribed species from Singapore and Macassar respectively. The specimen, however, wants the hinder legs.

PHILUS.

Philus, W. Wilson Saunders, Trans. Ent. Soc. ser. 2. ii. p. 110.

PHILUS RUFESCENS (♀).

P. rufo-ferrugineus; prothorace utrinque rotundato, fere obsolete marginato, disco linea elevata mediana longitudinali.

Reddish ferruginous, nearly glabrous; head closely and finely

punctured; prothorax closely punctured, transverse, broader than the head, its sides rounded, and only very imperfectly margined, the disk with a median elevated longitudinal line not extending to the apex or base; scutellum small, subtriangular; elytra much broader than the prothorax, closely punctured, the punctures larger than elsewhere, and occasionally confluent, two slightly elevated longitudinal lines on each; body beneath brown; legs brownish ferruginous, slightly hairy; antennæ about half as long as the body in the female, in the male probably longer than the body, as in *P. antennatus*, Gyll. (*P. inconspicuus*, W. W. Saund.).

Philus was referred by Mr. Saunders to the *Prionidæ*, near *Erioderus* and *Tragosoma*; but I think it is more correctly placed by M. J. Thomson with the true *Lepturinae*, near *Centrodera* and *Vesperus*. The marginal costa, marking the separation of the prothoracic pleuræ from the pronotum, one of the most important characters of the *Prionidæ*, is almost obliterated in the species just described, and, according to M. Thomson, there is not the least trace of it in another species from Northern India described by him (*P. globulicollis*). *Philus antennatus*, Gyll. (Schön. Ins. App. p. 280), is an old Chinese species, with which Mr. Saunders's *P. inconspicuus* is said to be identical.

STENODERINÆ.

DEJANIRA.

Dejanira, J. Thomson, Syst. Ceramb. p. 134.

DEJANIRA QUADRIPUNCTATA, J. Thomson, *l. c.*

M. Thomson's specimen of this fine Longicorn and one in my own collection are from Java. The antennæ of the female are only about two-thirds the length of the body.

DEJANIRA BIAPICULATA.

D. rufo-ochracea; *elytris in medio oblique fulvo maculatis, apice singulis biapiculatis*.

Reddish ochraceous; head and prothorax covered with a rich golden-yellow silky pubescence, the vertex with a short keel between the eyes, and a few punctures; spines of the prothorax moderately produced, triangular, the disk irregular, with two antemedian subapproximate tubercles; scutellum black, narrow, rounded behind, slightly grooved in the middle; elytra rather narrow, finely punctured, covered with a short dense pubescence, an oblique yellowish patch on each towards the outer side, the apices shortly biapiculate; body beneath with a delicate yellowish pubescence; legs slender; antennæ reddish ochraceous; eyes black. Length 7 lines.

There are three specimens, or perhaps species, in Mr. Lamb's collection, all differing in the prothorax, but otherwise, allowing for the usual differences in sex and size, apparently identical. It would be necessary to examine a larger series before this can be decided; and therefore I will only mention here that one of the three has a

large, very distinct, scar-like patch, strongly punctured, just above the spine, and the other has the disk closely punctured, except a smooth narrow stripe on each side advancing from the base.

DIOSYRIS.

Caput antice transversum, inter antennis projectum, pone oculos elongatum, haud angustatum.

Antennæ basi subapproximatæ, inter oculos insertæ.

Oculi rotundati, a basi antennarum remoti.

Prothorax suboblongus, antice posticeque latitudine æqualis.

Femora abrupte clavata; tarsi breviusculi, subæquales.

Head elongate and not narrowed behind the eyes; face short and transverse, antennary tubers approximate, forming a ridge in front, situated between but not near the eyes. Antennæ as long as or longer than the body, plumiferous; scape moderately long, clavate, curved; the third joint longer, also curved; fourth and fifth shorter; the sixth longest of all; the rest very considerably shorter in the female, much less so in the male. Eyes rounded, nearly entire. Palpi short, equal, linear, obtuse. External maxillary lobe plumose. Prothorax rather longer than broad, the anterior and posterior margins of nearly equal width, toothed at the sides, the disk irregular. Elytra broadest at the base, very irregular, the sides slightly narrowing posteriorly, the apices rounded. Legs, the intermediate and posterior pairs gradually longer; femora abruptly clavate, the posterior much shorter than the abdomen; tibiæ slender; tarsi rather short, nearly equal. Anterior coxæ globose. Anterior acetabula largely angulated. Prosternum raised to the level of the coxæ. Mesosternum declivous.

Evidently allied to *Mythodes*, J. Thoms., but differing in several respects from the characters of the genus as given by its author.

This genus is as remarkable as any other in the series of nearly isolated genera comprised in this and some of the allied subfamilies. It seems scarcely advisable to retain the *Rhagiomorphinæ*, which can only be recognized by their emarginate or lunate eyes from the *Stenoderinæ*, which have rounded entire or nearly entire eyes. The plumosity of the antennæ and of the posterior tibiæ of the species described below is common to both sexes. The male is the smallest, and has the last five joints of the antennæ much more elongated than the female: one of these measures $4\frac{1}{2}$ lines only, while a female measures eleven. The whole insect looks as if highly varnished, excepting, however, the last five antennal joints; and the elytra seem to have contracted or crumpled up in the process.

DIOSYRIS MIRANDA. (Pl. XLI. fig. 7.)

D. fulva, polita, fusco variegata.

Fulvous yellow varied with dark brown, shining as if varnished; head finely punctured, above the mouth a deep Λ -shaped impression, antennary tubers divided by a narrow groove; prothorax constricted anteriorly and posteriorly, the disk with nine callosities, exclusive of

the two lateral teeth, the five middle nearly forming a quincunx, the two foremost of which are elevated and conical; scutellum elongate, triangular; elytra very irregular, longitudinally marked with irregular raised lines, with smaller transverse lines between them, and rather finely punctured, the brown principally forming three large patches on each; body beneath dark glossy chestnut-brown; legs yellowish, shining, the femora at the base, band on the clava, and apex of the tibiæ brown; antennæ yellowish, the first six joints very glossy, the rest pubescent, opaque, the apex of the third beneath, the fourth almost entirely beneath, and the sixth at the apex generally tufted with dark fulvous hairs. Length $4\frac{1}{2}$ –11 lines.

DISTENIINÆ.

NOËMIA.

Noëmia, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 111.

NOËMIA FLAVICORNIS, Pascoe, *l. c.*, pl. 22. f. 8.

Found also by Mr. Wallace at Singapore and Sarawak. A specimen from the latter locality has a slender vertical spine on each side of the mesosternum, immediately above the coxa.

NOËMIA CHALYBEATA.

N. toto cyaneo-chalybeata; capite transversim sulcato et punctato; elytris apicibus bimucronatis.

Entirely bright steel-blue, with an almost imperceptible greyish pile; head finely and closely punctured, behind the eyes the punctures occasionally contiguous, forming slight transverse grooves; prothorax covered with small closely crowded irregular punctures, the apex transversely striated; scutellum scutiform, concave, finely punctured; elytra strongly punctured at the base, gradually becoming impunctate posteriorly, the punctures in rows, the alternate rows separated by a raised line, the apices bimucronate, the outer mucro produced; body beneath glabrous; legs with a few scattered hairs; antennæ nearly linear, about half as long again as the body. Length 10 lines.

A fine species, very distinct, *inter alia*, from the others hitherto described in its mucronate elytra, a peculiarity which would put it out of the genus as M. J. Thomson has defined it. The above description is from one of Mr. Wallace's specimens taken at Sarawak.

NECYDALINÆ.

MERIONCÆDA.

Merioncæda, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 238.

MERIONCÆDA ACUTA.

M. capite nigro; prothorace luteo; elytris longiusculis, testaceis, extus nigro limbatis; antennis articulis penultimis et antepenultimis flavidis, cæteris nigris.

Head black, nearly impunctate; prothorax bright yellow, with five oblong raised elevations on the disk, and a raised transverse anterior line; scutellum transversely subquadrate; elytra nearly as long as the abdomen, rather suddenly narrowed behind the middle, finely seriate-punctate, testaceous, the outer portion from the shoulders to the apex black; abdomen and postpectus black, antepectus yellow; legs black, femora at the base pale yellow. Length 4 lines.

There are a number of undescribed species in my collection; it is therefore only necessary here to say that the nearest ally of this insect is *M. scitella*, which has much shorter elytra, not suddenly narrowed posteriorly, with the *last two* joints of its antennæ yellowish. The males in this genus have longer and more slender antennæ than the females; but the extraordinarily clavate posterior femora, and the strongly spurred tibiæ of the same pair, appear, judging from my examples, to be alike in both sexes. M. J. Thomson places this genus in his "sous-tribe *Callichromitæ*," notwithstanding that the anterior acetabula are strongly angulated.

OBRINIÆ.

DEUTEROMMA.

Deuteromma, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 98.

DEUTEROMMA TESTACEUM, Pascoe, *op. cit.* p. 111.

To the short characters given in the above work, it is only necessary to add here that this is well distinguished from three or four other entirely testaceous species, not yet described, by the dark brown colour of the two basal joints of the antennæ.

CIOPERA.

Oculi fere integri.

Antennæ setaceæ, scapo cicatricoso.

Prothorax elongatus.

Head short and subtriangular in front, rather longer behind. Eyes oblong, nearly entire, prominent. Antennæ setaceous, longer than the body; the scape strongly cicatricose; the third joint longer; the fourth shorter than the third; the remainder longer than the third and subequal, or a little shorter towards the apex. Palpi with the terminal joint thicker, truncate. Prothorax elongate, not wider than the head. Elytra narrow, imperfectly embracing the abdomen at the sides. Legs slender; anterior shortest, posterior longest; femora thickened beyond the middle; tarsi much shorter than their tibiæ. Anterior coxæ produced, subconical, their acetabula strongly angulated.

A very distinct genus, like *Deuteromma* in habit, but with entire eyes, or in the slightest degree emarginate, and the scape with a strongly marked cicatricose apex. The posterior tarsi are, unfortunately, absent, it being, like many others of its subfamily, a fragile species.

CIOPERA DECOLORATA. (Pl. XLI. fig. 10.)

C. testacea, subtiliter pubescens; femoribus tibiisque basi infuscatis.

Testaceous, a little darker anteriorly, covered with a loose delicate pubescence; head and prothorax minutely and closely punctured, a short median line between the antennæ terminating in a semicircular impression above the mouth; prothorax slightly constricted anteriorly; scutellum oblong, narrow; elytra finely punctured, the punctures finer and more dispersed posteriorly, apices slightly dehiscent and pointed; body beneath pale testaceous; legs testaceous, the femora and bases of the tibiæ brownish; antennæ slight pilose. Length 6 lines.

RHINOTRAGINÆ.

EPIANTHE.

Antennæ apicem versus incrassatæ, scapo obconico.

Elytra integra, parallela.

Tarsi postici elongati.

Head not elongate anteriorly, slightly constricted behind, the forehead rather broad. Eyes narrowly emarginate, lateral, not approximate above. Antennæ thickened towards the apex, half as long as the body; the scape short, obconical; the second joint half the length of the scape; third longest of all; fourth, fifth, and sixth short; the last five shortest and forming a thickened continuous cylinder. Prothorax oblong, as broad as the head, slightly constricted near the base and apex. Elytra flattish, entire, nearly parallel at the sides. Legs unequal; femora thickened towards the apex; tibiæ slender; posterior tarsi with the basal joint as long as the rest together.

No member of the *Rhinotraginæ* was known from Asia until M. J. Thomson published his three genera *Plutonesthes*, *Artimpaza*, and *Cleomenes*; four more are here added, all very distinct from one another. These are all confined to single examples. Mr. Wallace's collections, too, contained but two specimens, each representing a genus; one of them, however, is *Artimpaza odontoceroïdes*, J. Thomson. From the individual rarity of these insects it is very likely that the group in Tropical Asia is much more extensive than it appears to be at present. It is probable that, when more of the species shall be known, some modifications of the characters of the genera here given will be requisite, especially of the antennæ. All the genera in Mr. Lamb's collection have the elytra entire—that is to say, neither shortened nor dehiscent at the suture, although, as in the subfamily generally, only imperfectly covering the abdomen at the sides.

EPIANTHE VIRIDIS. (Pl. XLI. fig. 5.)

E. viridi-metallica; pedibus anticis rufis.

Rich metallic green, scarcely shining, with numerous crowded punctures; upper lip, mandibles, and fore legs red; prothorax about half as long again as broad, the middle with a darker or bluish stripe; scutellum black, triangular; elytra with a golden tinge along the suture, the apex rounded; body beneath with silvery-white pubescence; antennæ black; legs, except the anterior, blackish, the tarsi paler. Length 4 lines.

MYDASTA.

Antennæ apicem versus incrassatæ, scapo obconico.

Elytra integra, postice angustata, lateribus haud declivibus.

Tibiæ robustæ; tarsi subæquales.

Head slightly produced anteriorly, not constricted behind. Eyes shortly ovate, not approximate above, strongly emarginate. Antennæ half as long as the body, distant at the base, arising close to the eyes; the scape shortly obconic; the third joint twice as long as the scape; the fourth considerably shorter; the remainder thickened and, as far as the penultimate, slightly produced at the apex; the last joint conical. Prothorax oblong, strongly constricted at the apex and base, the intermediate portion rounded. Elytra narrowed posteriorly, contiguous at the suture, not bent down at the sides. Legs very unequal, the posterior pair by far the longest; femora strongly incrassated towards the apex; tibiæ stout; tarsi subequal, moderately dilated. Abdomen contracted at the base, the first segment nearly as large as the rest together.

This genus has almost exactly the habit of *Acyphoderes*, Serv., but, *inter alia*, is without its muzzle, and with non-dehiscent elytra.

MYDASTA DISCOIDEA. (Pl. XLI. fig. 4.)

M. capite chalybeato; prothorace aterrimo, antice posticeque, scutello fasciisque (subtus) argenteo-albis; elytris æneo-nigris, ferrugineo plagiatis.

Head bluish black, strongly punctured, especially in front, where the punctures are divided by short vertical lines; lip brown, bordered with yellowish; prothorax intensely black, deeply and closely punctured, the anterior border dark blue, behind this border, on each side, a band of silvery-white hairs, a similar band on the constricted portion behind; scutellum oblong, with a dense silvery pubescence; elytra entirely glabrous, brassy black at the base, a large patch of reddish ferruginous (varying in size) occupying the middle and posterior portion, the apex rounded, deep bluish black, punctures at the base almost contiguous, becoming smaller and more distant posteriorly; body beneath dark purplish blue, the metasternum posteriorly and edge of the first segment of the abdomen silvery white; legs brownish red, shining, the base of the posterior femora and the middle of their tarsi dark brown; antennæ reddish, the last six joints black. Length 7 lines.

SESTYRA.

Antennæ lineares, scapo pyriformi.

Caput collo constricto, prothorace latius.

Tarsi subæquales.

Head broad, rather short anteriorly, constricted behind, the forehead concave. Eyes narrowly emarginate, lateral, not approximate above. Antennæ sublinear, nearly as long as the body; the scape rather short, claviform; third joint twice as long as the scape; the rest gradually shorter to the eighth or ninth. Prothorax subcylindrical, narrower than the head, sulcately constricted at the anterior third and at the base. Elytra narrow, entire, subparallel. Legs unequal, slender; femora thickened towards the apex; tibiæ slender; tarsi subequal.

The broad head, strongly constricted behind into a distinct neck, and the pyriform scape are peculiarly characteristic of the curious little Longicorn forming the type of this genus.

SESTYRA CEPHALOTES. (Pl. XLI. fig. 3.)

S. nigra; prothorace albo bifasciato; elytris fusco-nigris, basi brunneo plagiatis; pedibus articulisque duobus basalibus antennarum nitidis.

Black, nearly glabrous; head finely punctured, a few silvery hairs in front; prothorax closely punctured, silvery-white hairs lining the grooves and forming two bands; scutellum narrow at the base, gradually widening behind and truncate, covered with a silvery-white pubescence; elytra closely punctured, each puncture with a short white procumbent hair, at the base an oblong patch of reddish brown extending nearly to the middle, the apex pointed; body beneath with a close silvery pile; legs glossy black, the anterior tibiæ and tarsi luteous; antennæ with the basal and second joints black, shining, the remainder pale brownish. Length 4 lines.

MIMISTENA.

Antennæ setaceæ, scapo pyriformi.

Caput collo subconstricto, prothorace angustius.

Tarsi postici et intermediarii elongati.

Elytra integra.

Head not elongate anteriorly, slightly constricted behind, the forehead broad. Eyes lateral, narrowly emarginate, not approximate above. Antennæ setaceous, longer than the body, ciliated beneath; the scape pyriform; third joint longest; the fourth short; the next two gradually increasing in length; the seventh to the tenth slightly decreasing; the eleventh as long as the third. Prothorax broader than the head, subcylindrical, but flattish above, constricted anteriorly. Elytra not wider than the prothorax, rather contracted behind the shoulders, entire. Legs unequal; femora thickened towards the apex; tibiæ slender; tarsi with the basal joint of the intermediate and posterior pair elongate.

The longer setaceous antennæ and entire elytra will distinguish this genus from any of the Asiatic *Rhinotraginæ*. Whether the South American genera *Rhopalophora*, *Cosmisoma*, *Disaulax*, and others should be kept apart, as M. J. Thomson has done in his 'Essai,' although not in his more recent 'Systema,' is a question that I will not at present undertake to decide. Certainly *Mimistena* would point to their union.

MIMISTENA FEMORATA. (Pl. XLI. fig. 6.)

M. nigra, nitida; scutello niveo; elytris viridi-metallicis; antennis in medio pallidis.

Black, glabrous, shining; head finely punctured, with short raised vertical lines in front and between the antennæ; prothorax impunctate anteriorly, the disk behind the constricted portion irregular and finely punctured; scutellum rounded, covered with a snowy-white silky pubescence; elytra dark metallic green, irregularly punctured, the apex pointed; body beneath and legs glossy black; antennæ with the sixth, seventh, and eighth joints nearly white. Length 5 lines.

PLUTONESTHES.

Plutonesthes, J. Thomson, Syst. Ceramb. p. 160.

PLUTONESTHES CROCATA. (Pl. XLII. fig. 2.)

P. nigra, pilosa; prothorace elytrisque aurantiacis; corpore infra cyaneo-chalybeato.

Black, with long scattered erect hairs; head closely punctured, much constricted behind the eyes; prothorax narrow, covered with a silky orange pubescence; scutellum triangular; elytra four times as long as the prothorax, the sides parallel at the base, but gradually expanding before the middle, and rounded at the apex, covered with a coarse silky orange-coloured pubescence, darker or brownish at the apex; body beneath bright steel-blue; legs glossy black; antennæ opaque black, hairy at the base. Length $4\frac{1}{2}$ lines.

M. J. Thomson's *P. rufipennis* differs from the above, according to his description, in its roughly punctured prothorax. He makes no mention of the long scattered hairs and glossy steel-blue of the under surface; and therefore I do not hesitate in considering it distinct. Another nearly allied species is in my collection from Singapore with shorter legs and apex of the elytra blue black.

ERYTHRINÆ.

ERYTHRUS.

Erythrus, White, Catal. Long. Brit. Mus. p. 142.

Pseudoleptura, J. Thomson, Essai, &c., p. 148.

ERYTHRUS IGNITUS.

E. niger; prothorace coccineo, utrinque vittis duabus nigris; elytris coccineis, lateraliter fortiter declivibus, apice nigris.

Black ; head closely punctured ; prothorax closely granulated, bright vermilion, its anterior border and a lateral stripe on each side, not reaching to the base, black ; scutellum small, transverse ; elytra brilliant vermilion, posteriorly black, covered with finely granular points, strongly declivous at the side, the sutural angle at the apex slightly produced ; body beneath black, the sterna subnitid, the abdomen opaque ; legs and antennæ black. Length 9 lines.

ERYTHRUS LACERTOSUS.

E. niger ; prothorace coccineo, nigro bimaculato ; elytris coccineis, lateraliter fortiter declivibus, tertia postica nigris.

Black ; head small, finely and closely punctured ; prothorax vermilion, slightly nitid, rather coarsely punctured comparatively, the intervals subgranulose, two black closely punctured round slightly elevated spots on the middle, the space between them shortly keeled ; scutellum subtriangular ; elytra bright brick-red, opaque, minutely punctured throughout, the intervals subgranulose, sides distinctly declivous, the posterior third or nearly so black, the apex dehiscent, the suture produced into a short triangular point ; body beneath from the anterior coxæ black, the pectus anterior to them red ; legs and antennæ short. Length 12 lines.

ERYTHRUS APICULATUS.

E. niger ; prothorace coccineo, nigro bilineato ; elytris coccineis, lateraliter fortiter declivibus, apice nigris, ad suturam elongatoproductis.

Black, except the prothorax, scutellum, and elytra ; head with a few reddish hairs on the vertex and around the eyes ; prothorax reddish vermilion, covered with shallow punctures, the middle with two mamilliform tubercles, and two black stripes with an intermediate subobsolete spot, the sides black ; scutellum transverse, rounded behind, reddish ; elytra vermilion, black at the apex, covered with numerous shallow minute punctures and a fine sparse vermilion pubescence, the sides declivous, apex at the suture strongly produced ; body beneath opaque black ; legs short ; antennæ with the third joint somewhat dilated. Length 8 lines.

ERYTHRUS ATRICOLLIS.

E. omnino niger, elytris exceptis ; prothorace carina postica instructo ; elytris apice subchalybeato-nigris, lateribus vix declivibus.

Entirely black, except the elytra ; head more elongate below the eyes, the neck granulose ; prothorax closely punctured, an elevated median line or carina posteriorly ; scutellum transverse, pointed behind ; elytra vermilion, the apex black tinged with blue, closely punctured, the intervals granulose throughout, the conjoined apices rounded ; body beneath black, with a slight silvery pubescence on the abdomen ; legs longer than in the preceding ; antennæ with the third joint nearly cylindrical. Length 7 lines.

Erythrus differs from the next genus, *Pyrestes*, principally in its short prothorax; in other characters there are variations: but the two, although closely allied, are distinguishable at a glance. The sculpture of the prothorax and elytra is somewhat peculiar. It consists of minute crowded punctures, especially on the elytra, with the intervals so raised as to give them the appearance of being equally minutely granulated, shagreened as it were; pubescence is almost wanting, except in *E. apiculatus*. *Erythrus* used by Mr. Walker for a genus of *Chalcididae* was never anything but a catalogue name, and therefore it does not appear to me to be necessary to change Mr. White's.

PYRESTES.

Pyrestes, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 96.

PYRESTES POLITUS. (Pl. XLII. fig. 6.)

P. niger, nitidissimus; elytris impunctatis, apicibus subbimucronatis, læte coccineis, macula præapicali excepta; abdomine rufo, nitido.

Deep black, except the elytra, and very smooth and glossy; head rather broad below the eyes, finely punctured; prothorax at the apex nearly as broad as the head, transversely striate anteriorly, and nearly impunctate; scutellum oblong, very convex, narrowed behind; elytra less than twice as long as the head and prothorax, impunctate, rich glossy vermilion, except a large black præapical spot, the base irregularly furrowed on each side of the scutellum, the sides with a strongly marked raised margin, the apices emarginate, with the sutural angle mucronate, and the external only slightly produced; abdomen dark vermilion, shining, sterna black; legs rather stout; antennæ with the third joint shorter than the scape, fourth shortest of all, except the second. Length 10 lines.

Distinguished, *inter alia*, from *P. eximius*, which are the only two glossy species at present known, by its bimucronate elytra.

PYRESTES SCAPULARIS. (Pl. XLII. fig. 5.)

P. niger, opacus; prothorace elytrisque (sutura, apice scapulisque exceptis) coccineis, his apicibus extus rotundatis, ad suturam mucronatis; abdomine nigrescente.

Head black, narrowed below the eyes and sparingly punctured, the vertex closely punctured; prothorax at the vertex as broad as the head, deep vermilion, black at the sides and the anterior border, with deep crowded punctures; scutellum narrowly triangular, concave; elytra bright vermilion, the suture, shoulders, and apex black, closely punctured, the punctures coarser at the base, the intervals subgranulose, the apices rounded externally but slightly mucronate at the suture; body black, but having a reddish tinge on the abdomen; legs short; antennæ with the third joint longer than the scape, the fourth not shorter than the four or five terminal joints. Length 8 lines.

PYRESTES VIRGATUS. (Pl. XLII. fig. 4.)

P. niger, opacus; prothorace elytrisque coccineis, illo vitta nigra mediana, his sutura apice scapulisque nigris, apicibus conjunctim rotundatis.

Black, except the prothorax and elytra; head a little narrowed below the eyes, and comparatively rather coarsely punctured; prothorax longer and narrower than in any of the above, its posterior border scarcely broader than the anterior, vermilion, with a narrow median stripe and its sides black, coarsely and deeply punctured, the interstices anteriorly forming slightly waved transverse lines; scutellum narrowly triangular; elytra rather narrow at the base, vermilion, the suture, shoulders, and apex black, closely and deeply punctured and much more coarsely at the base, the apex rounded and without any mucro; body beneath black; legs short; antennæ with the third joint longer than the scape, the fourth as long as the penultimate, the sixth to the tenth inclusive broadly dilated. Length $4\frac{1}{2}$ lines.

PYRESTES NIGRICOLLIS.

P. niger, opacus; elytris (sutura, apice scapulisque exceptis) coccineis, apicibus extus rotundatis, ad suturam submucronatis; abdomine apicem versus rufescente.

Black, except the elytra; head narrow and elongate below the eyes, closely punctured on the vertex; prothorax black, rather suddenly constricted anteriorly and as broad as the head, covered with deep somewhat crowded punctures; scutellum narrowly triangular, raised at the sides; elytra rather narrow, scarcely broader posteriorly, vermilion, the suture, shoulders, and apex black, closely punctured, the punctures much coarser at the base, the intervals subgranulose, the apex of each rounded externally, but having a slight mucro at the suture; body beneath black, the last two or three abdominal segments reddish; legs rather slender; antennæ with the third joint longer than the scape, the fourth as long as the last four or five joints. Length 6 lines.

All the species (eight) of this genus are very distinct, as a comparison of their diagnostic characters will show. Mr. Wallace appears to have met with only a single example, *P. eximius*, at Sarawak. Mr. Bowering found *P. cardinalis* not uncommonly at Hong Kong. The other two, *P. miniatus* and *P. hæmaticus* are from Northern India and Northern China respectively.

CALLICHRONINÆ.

CHLORIDOLUM.

Chloridolum, J. Thomson, Syst. Ceramb. p. 174.

CHLORIDOLUM THOMSONI.

Callichroma thomsoni, Pascoe, Trans. Ent. Soc. ser. 2. v. p. 24.

Taken also by Mr. Wallace at Singapore and Sarawak. One of Mr. Lamb's specimens is an inch in length.

CHLORIDOLUM CINNYRIS.

C. angustatum, *aureo-viride*; *prothorace apice subtilissime transversim striato*; *scutello obsolete punctato*; *elytris vittis tribus cyaneo-viridibus ornatis*; *antennis pedibusque chalybeato-cyaneis*.

Narrow, golden-green; head finely punctured, and slightly vertically striated between the eyes; prothorax oblong, broader than the head, finely transversely striated, on the depressed apical portion the striæ are nearly obsolete; scutellum triangular, scarcely punctured; elytra covered with small crowded punctures, the suture and sides striped with bluish green; body beneath greenish golden-yellow; legs glossy chalybeate blue, the posterior very long, the intermediate and anterior femora greenish; antennæ with the scape green, the remaining joints purplish blue deepening into blackish. Length 6 lines; posterior legs 10 lines.

A more slender form than *C. thomsoni*, the apex of the prothorax very faintly striated, not more strongly than the rest as in *C. thomsoni*, and the scutellum so finely punctured that it might almost be said to be impunctate, while in *C. thomsoni* the punctures are coarser than those on the elytra. *Chloridolum* has been separated from *Aromia* (*Callichroma*) on account of its more slender antennæ and legs. As in many other cases, this is only a question of degree; but these characters, vague though they be, appear to mark a tolerably natural section of the old genus *Callichroma*. It is worth remarking that, taking *Callichroma* in its widest sense, Mr. Wallace found twenty-nine species scattered among the islands of the Malayan archipelago, including New Guinea, while only a single specimen (*C. cinderella*, White) is known from Australia. In other respects the genus is cosmopolitan.

There is also in the collection a single female of a species belonging apparently to M. Thomson's genus *Leontium*.

PACHYTERIA.

Pachyteria, Serville, Ann. Soc. Ent. de France, t. 11. p. 553 (1834).

Niræus, Newman, Charlesworth's Mag. Nat. Hist. iv. p. 194 (1840).

PACHYTERIA EQUESTRIS.

Niræus equestris, Newman, Entom. p. 79.

Mr. Newman described this magnificent insect from a specimen, without a locality, in the then collection of this Society. It differs from the next species in its more transverse prothorax strongly angulated at the sides, the distinctly separated punctures, the rounded non-dehiscent elytra, and antennæ with the five terminal joints black. In their bright and strongly contrasted colours they are otherwise almost alike.

PACHYTERIA SPECIOSA. (Pl. XLIII. fig. 5.)

P. subglabra, coccinea, nitida; capite dimidio apicali, elytris et corpore infra viridi- vel cyaneo-chalybeatis; pedibus atris; antennis flavis, articulis duobus basalibus luteis.

Nearly glabrous, shining; head dark metallic green, closely and finely punctured; lips luteous; mandibles and eyes black; prothorax bright scarlet, sharply sulcated anteriorly, closely punctured, the punctures more or less confluent, the intervals, especially at the sides, thrown up into well-marked transverse corrugations, sides rounded and with a short tooth-like angle in the middle; scutellum black, narrowly triangular; elytra with the basal half bright scarlet, the rest dark metallic green, closely punctured, gradually tapering from the base, the apices narrow, slightly deliscent, and subtruncate; body beneath glossy bluish or greenish; legs black; antennæ lemon-yellow, the two basal joints luteous. Length 12 lines.

PACHYTERIA LAMBII. (Pl. XLIII. fig. 6.)

P. subglabra, subnitida; prothorace rufo; elytris subflavis, dimidio apicali pedibusque viridi- vel chalybeato-nigris; antennis subflavis, articulis quatuor basalibus nigris; corpore infra violaceo.

Nearly glabrous, subnitid; head dark green, thickly punctured; lip and mandibles dark glossy brown; eyes black; prothorax dull red, slightly sulcated anteriorly, closely punctured, the disk corrugated laterally, sides with a strong tooth-like angle; scutellum black, narrowly triangular; elytra lemon-yellow on the basal half, the rest black with a greenish tint, closely punctured, the dark posterior half very minutely, gradually tapering from the base, the apices somewhat narrow and slightly deliscent; body beneath and legs dark blue- or violet-black; antennæ lemon-yellow, the four basal joints black. Length 10 lines.

PACHYTERIA VIRESCENS. (Pl. XLIII. fig. 2.)

P. subglabra, viridi-metallica; prothorace læte rufo-brunneo; antennis flavis, articulis quinque basalibus, scapo excepto, nigris.

Nearly glabrous, bright metallic green; head closely punctured; mandibles black; prothorax of a rich chocolate-brown colour, doubly sulcated anteriorly, with well-marked transverse corrugations over the entire disk, the intervals finely punctured, the sides strongly angulated, the angle terminating in a short tooth; scutellum narrowly triangular; elytra gradually narrowing from the base, finely punctured throughout, the apices rounded; body beneath and legs glossy metallic green; antennæ with the scape dark green, the four succeeding joints black, the remainder lemon-yellow. Length 14 lines.

PACHYTERIA SPINICOLLIS. (Pl. XLIII. fig. 4.)

P. hirsuta, brunneo-lutea; capite prothoraceque æneo-fuscis, hoc

confertim punctato et utrinque fortiter spinoso; scutello nigro; corpore infra toto violaceo.

Covered with minute erect stiffish hairs, dark but very clear luteous, approaching to chestnut-red on the elytra; head and prothorax dark brassy brown, with numerous small crowded punctures, the latter with a very strong angular spine on each side; scutellum narrowly triangular, black; elytra covered with minute crowded punctures, each with three slightly raised longitudinal lines, the apices broadly truncate; body beneath and anterior and intermediate coxæ dark glossy violet; antennæ and legs uniformly brownish luteous, the posterior coxæ black. Length 18 lines.

PACHYTERIA INSIGNITA.

P. hirsuta, brunneo-lutea; capite prothoraceque æneo-fuscis, hoc rugoso-punctato et utrinque angulato; elytris apicem versus nigricantibus; medi-pectore et abdomine violaceis.

Resembles the last, but the prothorax with the punctures more or less confluent, giving it a rugose surface, and its sides rounded anteriorly and produced into a broad angular process, terminating in a blunt tooth or tubercle, the posterior third of the elytra bluish black, their apices narrowly emarginate, the middle of the posterior thighs and three terminal joints of the antennæ black, the ante- and medipectus of the same brassy colour as the prothorax, and the coxæ more or less luteous. Length 18 lines.

PACHYTERIA STRUMOSA. (Pl. XLIII. fig. 3.)

P. hirsuta, brunneo-lutea; capite æneo-fusco, prothorace rugoso-punctato, utrinque valde rotundato, mutico, in medio æneo-fusco; elytris apicem versus nigrescentibus.

In many respects similar to the two preceding, but the prothorax strongly rounded at the sides, without any spine or tooth, luteous chestnut, with the greater part of the disk dark brassy brown, the same colour as the head, and this portion as distinctly defined as if it had been a piece let in; posterior third of the elytra or thereabouts black, tinged with purple, their apices narrowly emarginate; intermediate femora and posterior legs, except their tarsi, blackish; abdomen and postpectus glossy violet; medipectus and prosternum dark brassy brown; antennæ luteous, with the last three and part of the eighth joints black. Length 15 lines.

I am unable to separate in any way Mr. Newman's genus *Niræus*, founded on a species from the Tenasserim coast, from *Pachyteria*, which was at that time probably unknown to him. The genus is one of the handsomest among the Coleoptera, and hitherto has been limited, excluding the *Niræi*, to *P. fasciata*, Fab., and *P. bicolor*, Parry*. The latter, from Java, is allied to *P. insignita*. All the species here mentioned discharged a yellowish acrid fluid when handled—Mr. Lamb believes, from the abdomen. The genus is cha-

* Trans. Ent. Soc. v. p. 182, pl. 18. f. 5.

acterized, *inter alia*, by the clypeus or lowermost part of the face being produced so as to form a kind of pedicel for the lip.

CLYTINÆ.

CLYTANTHUS.

Clytanthus, J. Thomson, Syst. Ceramb. p. 190.
Anthoboscus, Chevrolat.

CLYTANTHUS ANNULARIS.

Callidium annulare, Fabricius, Mant. Ins. i. p. 156; Olivier, Entom. iv. no. 70. p. 48, pl. 7. f. 74.

This species ranges from India and South China to Sydney. It is the type of M. Chevrolat's genus *Chlorophorus*, which, according to its author, only differs from the present in its more slender antennæ and very globose prothorax. Another species in the collection is allied to *Clytanthus glaucinus*, Bois. (*Perissus*, Chev.), and a third species to *C. sumatrensis*, Lap. et Gory. A new genus, of which I have four or five species, is also represented in the collection.

XYLOTRECHUS.

Xylotrechus, Chevrolat, Ann. Soc. Ent. de France, 1860, p. 456.

XYLOTRECHUS AUSTRALIS.

Clytus australis, Laporte de Castelnau et Gory, Monog. du G. Clytus, p. 99, pl. 19. f. 118.

This species is also very widely distributed. I have specimens from Sumatra, Borneo, Celebes, Amboyna, Aru, and New Guinea; latterly I have received it from Queensland.

DEMONAX.

Demonax, J. Thomson, Essai, &c., p. 226; Syst. Ceramb. p. 191, sub *Acrocyrta*.

DEMONAX MACILENTA.

Acrocyrta macilenta, Chevrolat, Rev. et Mag. de Zool. p. 82.

M. Chevrolat places this species, together with several others, in my genus *Acrocyrta*; and, in his 'Systema,' M. Thomson sinks *Demonax* as a synonym of it. I am not prepared at present to adopt this view, as I think *Acrocyrta*, in the short broad basal joint of the anterior tarsi, long antennæ, with the terminal hook in the males, and the short elytra, is sufficiently distinct. M. Chevrolat, in his "*Clytides d'Asie*," &c., published in the 'Memoirs' of the Liège Society, misquotes the volume and page of the work in which my description was published, and makes me write *Apocyrta*. Another and much smaller species is in the collection.

PROC. ZOO. SOC.—1866, No. XXXIV.

BICON.

Oculi rotundati, integri.

Antennæ breves, articulis terminalibus septem dilatatis.

Prothorax ovatus.

Tarsi breviusculi, æquales.

Head not constricted behind, quadrate in front, slightly prolonged into a muzzle, a carina on each side below the antennary tuber. Eyes round, entire. Antennæ short, distant at the base; the scape shortly cylindrical; third joint longest; the rest gradually shorter and more or less dilated unilaterally, especially from the sixth; the last broadly ovate, pointed. Prothorax oblong, ovate, convex, bisinuate at the base. Elytra rather elongate, narrow. Legs moderate; femora rather thickened towards the apex, the intermediate and posterior of equal length; tarsi short, equal. Anterior acetabula nearly entire. Pro- and meso-sterna simple.

Allied to *Epipedocera*, Chev., but with differently formed antennæ and prothorax. In the former respect it approaches *Euryarthrum*, and so far serves to connect that genus with the more normal forms of the *Clytinæ*.

BICON SANGUINEUS. (Pl. XLI. fig. 8.)

B. niger; prothorace elytrisque, apice excepto, sanguineis; subtus argenteo pilosus; abdominis segmentis tribus apicalibus glabris, fusciscentibus.

Black; prothorax and elytra, except at the apex, blood-red; body beneath covered with a close silvery pubescence, the last three segments of the abdomen glabrous, brownish; head finely and thickly punctured; antennæ also punctured, towards the end paler, with a delicate silvery pile; prothorax not much broader than the head, covered with coarser and more crowded punctures; scutellum subcordiform; elytra subseriate-punctate, more irregularly posteriorly, the intervals more or less granulose, the apices bimucronate; femora and tibiæ coarsely punctured, clothed with a few whitish hairs; intermediate and posterior tibiæ slightly curved; tarsi with a sparse silvery pile. Length 5 lines.

DERE.

Dere, White, Catal. Long. Brit. Mus. p. 248.

DERE MARGINATA.

D. rubra; capite, lateribus prothoracis et elytrorum nigris.

Brick-red; head, and prothorax and elytra at the sides, black; body beneath silvery white; antennæ black, greyish towards the apex; legs blackish, with a silvery pubescence, which is densest at the base of the femora; head and prothorax covered with close shallow punctures; elytra with a closely granulated surface, the apices much more decidedly bimucronate than in *D. thoracica*. Length 4 lines.

Dere thoracica, the type of the genus, was originally discovered

by Mr. Fortune in the north of China, and it has since been found commonly on the coasts of Mantchuria mixed with numerous European or boreal forms. The occurrence, therefore, of a second species so remote from the locality of the first is very interesting.

SIGEUM.

Caput inter oculos planatum, subdilatatum.

Antennæ apicem versus serratæ, art. tertio scapo longiore.

Pedes postici graciles, elongati.

This genus differs from *Euryarthrum*, Bl. (*Blemmya*, Pasc.), in its longer and narrower antennæ, more distant at the base, the broader flattish forehead, and long attenuated posterior legs. The elytra are in no wise carinated; and, owing to the weaker and more slender form, the habit is notably dissimilar.

SIGEUM HUMERALE. (Pl. XLI. fig. 2.)

Blemmya humeralis, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 99.

In Mr. Lamb's specimen the lines on the elytra, instead of being white, are yellow. Mr. Wallace once took it in Singapore.

EURYARTHNUM.

Euryarthrum, Blanchard, Hist. Nat. des Insectes, t. ii. p. 149 (1845).

Blemmya, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 42 (1856).

No less than six new species are in this collection, all with the terminal joints of the antennæ from the sixth, or in two from the seventh, inclusive, ochreous yellow. Two of these species, *E. carinatum* and *E. lambii*, are in other respects almost identical with *E. albocinctum* and *E. bifasciatum* respectively, confined, so far as we know at present, the former to Singapore and Sarawak, the latter to Sarawak only. In general form and coloration they are strikingly alike, and in the latter respect are imitated by *Asmedia*, which, as we shall see, has the antennæ of *Pachyteria*, some species of this genus having those organs coloured precisely in the same remarkable manner. All the *Euryarthra* are intensely black, very closely and finely punctured, especially on the prothorax, and are furnished above with one or more bands of silky white or yellowish hairs. The under surface is clothed with a thin delicate silvery pile, the shade varying according to the light; but generally it is more condensed, forming well-marked lines, on the edges of the abdominal segments and sterna. The pubescence is so slight on the legs that it can only be detected by a good lens. In many individuals the basal abdominal segment is very large, the others being reduced to mere rings. I am not satisfied whether this is merely sexual or not. The most striking peculiarity, however, of this genus is a well-marked rim round the elytra similar to that of some of the *Tenebrionidæ* amongst the Heteromera, but not closely embracing the abdomen.

EURYARTHURUM NODICOLLE. (Pl. XLII. fig. 7.)

E. atrum; *prothorace lateraliter subtrinodoso*; *elytris bifasciatis, supra planatis, apice singulatim biapiculatis*; *antennarum articulis ultimis sex rufo-ochraceis*.

Black; mesial line on the vertex nearly obsolete; prothorax irregular at the side, slightly trinodose, a yellowish line along the posterior margin; scutellum small, triangular, yellowish; elytra flat above, declivous at the sides, the apex of each biapiculate, the inner apiculus a prolongation of the sutural line, two yellowish bands at equal distances from each other and the base and apex; antennæ with the last six joints reddish yellow. Length 11 lines.

EURYARTHURUM LAMBII.

E. atrum; *prothorace lateraliter obsolete nodoso*; *elytris bifasciatis, planatis, apice singulatim biapiculatis*; *antennarum articulis ultimis quinque rufo-ochraceis*.

Black; mesial line confined to a narrow well-marked impression between the eyes; prothorax slightly irregular at the sides, a white line along the posterior margin; scutellum subtriangular, black; elytra flat above, declivous at the sides, the apex of each biapiculate, two white bands at equal distances from each other and the base and apex; antennæ with the last five joints reddish yellow. Length 8-10 lines.

EURYARTHURUM CARINATUM.

E. atrum; *prothorace latiore, lateraliter obsolete nodoso*; *elytris medio unifasciatis, planatis, depressis, utrinque carinato-declivis, apice singulatim biapiculatis*; *ant. art. ult. sex rufo-ochraceis*.

Black; mesial line well marked between the eyes, and joining the transverse impression below them; prothorax much broader and more transverse than in the two preceding species, obsoletely nodose at the side, bordered with a white line posteriorly; scutellum triangular, white; elytra flat or almost concave above, especially posteriorly, the angle at the commencement of the declivous portion strongly marked, or even ridged, the apex of each shortly biapiculate, a single whitish band nearly in the middle, slightly interrupted, however, as it crosses the ridge; antennæ with the last six joints reddish yellow. Length 6-7 lines.

EURYARTHURUM INTERRUPTUM.

E. atrum; *prothorace lateraliter rotundato*; *elytris bifasciatis, planatis, depressis, utrinque minus declivis, apice obsolete truncatis*; *ant. art. ult. sex rufo-ochraceis*.

Black; mesial line deeply cut between the eyes and joining the transverse impression below them; prothorax rounded at the sides, bordered with white posteriorly; scutellum small, triangular; elytra flat, particularly at the base, less declivous, and without trace of a

ridge, the apex nearly rounded or very slightly truncate, two white bands, the anterior interrupted at the suture and declivous portion, and placed midway between the base and posterior band, the latter continuous or nearly so, and much nearer to the anterior band than to the apex; abdomen sometimes entirely black; antennæ with the last six joints reddish yellow. Length 6-7 lines.

EURYARTHURUM EGENUM.

E. atrum; elytris bifasciatis, basi paulo planatis, haud declivis, apice rotundatis; ant. art. ult. quinque vel sex rufo-ochraceis.

Black, with a narrow mesial line between the eyes, and a circular impression beneath them; prothorax slightly produced at the sides, margined with white posteriorly; scutellum small, triangular; elytra depressed at the base, very slightly flattened, not declivous at the sides, the apex rounded, two white bands, the anterior interrupted at the suture and side, the posterior continuous, the first a little nearer the base than the second is to the apex; antennæ from the apex of the sixth or seventh joints reddish yellow. Length 6 lines.

EURYARTHURUM ATRIPENNE.

E. supra totum atrum, margine postico prothoracis excepto; elytris planatis, apice oblique truncatis; ant. art. ult. sex rufo-ochraceis.

Black, with a deeply impressed mesial line between the eyes and a circular impression beneath them; prothorax somewhat oblong, the sides nearly round, the posterior margin edged with white; scutellum small, subtriangular; elytra entirely black, flattened, the sides doubly declivous (forming two lines), the apex obliquely truncate; antennæ with the last six joints reddish yellow. Length 6 lines.

ASMEDIA.

Antennæ apicem versus crassiores, articulis haud planatis.

Prothorax lateraliter angulatus.

Prosternum haud productum.

Head elongate, rather concave below the eyes; mandibles produced. Eyes large, lateral, narrowly emarginate. Antennæ shorter than the body, moderately distant at the base; the scape short, obconic; the third joint longest; the remainder gradually thicker to the eighth, not flattened or produced at the apex. Prothorax short, broader than the head; the sides angulated. Elytra narrow; the sides gradually receding to the apex. Legs unequal; the posterior pair elongate. Anterior coxæ globose; their acetabula narrowly angulated. Prosternum not produced. Mesosternum simple.

The species on which this genus is founded bears an extraordinary resemblance to *Euryarthrum*, but its antennæ are those of *Pachytaria*, two genera certainly very different in general appearance, notwithstanding many characters in common; and, the latter being closely related to *Callichroma*, we might be led to regard all these

genera as portions of one group (*Callichrominæ*) as M. Thomson, without any knowledge of the species before us, has done. Again, looking to the genera connected with *Euryarthrum* (such as *Homalomesa* and *Prothema*), and in a less degree with *Dere*, *Obrida*, and *Typhocesis*, we are led away to the *Clytinæ* without being able to draw any satisfactory line between them. Such facts may serve to show the risk of our failing to recognize any affinity between two genera apparently widely different, but connected by intermediate forms (in many instances remaining to be discovered), and prepare us for the discrepancies which may occur in the views even of the same author.

ASMEDIA MIMETES. (Pl. XLI. fig. 11.)

A. atra; elytris albo bifasciatis; antennis apicem versus ochraceis.

Deep black; head and prothorax finely and very closely punctured; scutellum triangular; elytra very minutely punctured, two narrow white hairy bands dividing them into nearly three equal parts, the apex rounded; body beneath dark steel-blue, with a short silvery white pubescence; antennæ gradually passing into ochraceous yellow from the fourth joint, the last five entirely ochraceous. Length 9 lines.

CERAMBYCINÆ.

CERAMBYX.

Cerambyx, Linné, Syst. Nat. ed. 12. i. s. 2. p. 621; Serville, Ann. Soc. Ent. de Fr. iii. p. 13.

CERAMBYX PRUINOSUS.

C. purpureo-fuscus; elytris confertissime punctatis, pilis subtilissimis dispersis, apicibus emarginatis, extus mucronatis; antennis pedibusque rufescentibus.

Dark purplish brown, subnitid; head finely punctured, grooved between the antennæ, the middle of the groove with a short strongly marked carina, below this a transversely impressed circular line; prothorax about equal in length and breadth, with a small prominent spine on each side, the disk with numerous short irregular corrugations; scutellum triangular; elytra minutely punctured, the punctures very close together between very delicate short transverse ridges, each mostly having at its base a short silvery hair (giving an appearance to the naked eye suggestive of the bloom on the plum), apices slightly emarginate, the outer angle with a short stout mucro; body beneath dark chestnut-brown, minutely pubescent; legs yellowish brown, the tibiæ and tarsi paler, a dark ring at the extremity of the femora; antennæ not longer than the body (♀?), pale reddish, darker at the base. Length 11 lines.

The sole example in the collection appears to be a female, and is, I think, more suggestive of *C. denticornis** of Fabricius than of any European species.

* This and a few other species will, however, scarcely fit into any of the genera into which latterly even the restricted genus *Cerambyx* has been divided.

NEOCERAMBYX.

Neocerambyx, J. Thomson, Essai, &c. p. 194.

NEOCERAMBYX LAMBII.

N. fuscus; *prothorace in medio longitudinaliter bisulcato, transverse profunde striato, striis subcurvatis, regularibus*; *elytris velutinis, griseo-argenteis, apicibus fortiter bispinosis*.

Dark brown; head broadly grooved between the eyes, with a strongly marked longitudinal crest dividing it, under each antennary tuber a deep fovea; prothorax with two longitudinal grooves meeting anteriorly, space between them and the sides regularly and deeply striated transversely, the striæ slightly curved, these and the impressions on the head clothed more or less with glossy yellowish hairs; scutellum triangular; elytra closely covered with a velvety greyish-silvery pubescence, varying in large dark and silvery patches according to the light, apices strongly bispinose; body beneath and legs dark brown, with a greyish pile; antennæ in the male very long, the third and fourth joints nodose, the fifth and some of the following with a short spine at the apex. Length 16 lines.

Nearly allied to *N. aurifaber*, White, but the transverse striæ on the prothorax fewer, larger, and not at all twisted or intermixed as in that species.

NEOCERAMBYX ? INTRICATUS.

N. fuscus; *prothorace profunde foveato-impresso, interstitiis intricato-reticulatis*; *elytris subtiliter griseo pubescentibus, sericatis, apicibus oblique truncatis, ad suturam mucronatis*.

Dark brown, mostly covered with a delicate greyish pubescence having a silky texture, particularly on the elytra; head finely grooved between the eyes, a transverse ring-like impression in front; prothorax covered with deep slightly oblique foveæ, the intervals forming a twisted net-like series of lines clothed with greyish hairs; scutellum triangular; elytra somewhat silky, uniformly greyish, but varying in certain lights, the apices oblique, with the sutural angle mucronate; body beneath and legs brown, shining, with a sparse greyish pile; antennæ (♂) twice as long as the body, with the third joint two or three times as long as the scape, scarcely nodose, (♀) scarcely longer than the body, third joint twice as long as the scape, the fifth and following joints dilated on one side. Length 17 lines.

This species can only be provisionally retained in *Neocerambyx*, as it forms an exception on account of the long third joint of the antennæ, but the whole subfamily requires a thorough revision; all I can see clearly is that we have either too many or too few genera. Since M. J. Thomson proposed *Neocerambyx* in his 'Essai,' he has separated from it *Hoplocerambyx*, *Pachydissus*, Newm., *Conothorax*, and *Tapinolachnus*, leaving the characters he would now assign to it doubtful. *N. lambii*, however, and several others, including the

type *N. paris*, appear to form a natural group sufficiently distinct from the European typical *Cerambyces*.

HOPLOCERAMBYX.

Hoplocerambyx, J. Thomson, Syst. Ceramb. p. 229.

HOPLOCERAMBYX RELICTUS.

H. fuscus, *pube grisea tectus*; *capite pone oculos breviusculo*, *fronte haud impressa*; *prothorace transverse striato*, *interstitiis interruptis*, *pubescentibus*.

Dark brown, with a fine greyish pubescence; head but slightly lengthened behind, rather strongly grooved between the eyes, without, or with a very indefinite impression in front; prothorax with transverse shallow striæ, the interstices interrupted and pubescent, except at the base and apex; scutellum triangular; elytra with a delicate slightly silky pubescence, the light reflecting broad transverse wavy bands, the apices oblique, mucronate at the suture; body beneath and legs dark brown, shining, with a thin greyish pile; antennæ in the female about two-thirds as long as the body, the scape slightly shorter than the third joint. Length 18 lines.

I have described this from a specimen in my own collection from Singapore, but I am not certain that it may not turn out to be a small example of *H. morosus*. It is quite evident that the species of this and the two preceding genera are very variable; and I question, if a large series could be obtained, if many of them would be found to have any reliable specific characters at all. The males of this genus have, so far as I have seen, naked and strongly punctured antennæ, while in the females they are pubescent and, except the scape, impunctate.

DIALEGES.

Dialeges, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 46.

DIALEGES PAUPER, Pascoe, *op. cit.* p. 47, pl. 16. f. 7.

Found also in Sarawak by Mr. Wallace.

IMBRIUS.

Antennæ *in utroque sexu plus minusve serratæ*; *scapo integro*.

Oculi *grosse granulati*, *ad os approximantes*.

Prothorax *oblongus*, *muticus*.

Pedes *æquales*; *femora in medio incrassata*.

Head small, narrow, more or less exserted. Eyes broadly emarginate, almost contiguous above and approximating to the mouth below, the facets large. Antennæ as long as the body; the scape short, entire at the apex; third and fourth joints generally not longer than the scape, more or less nodulous in the males; the rest, except the last, dilated unilaterally towards the apex. Prothorax oblong, scarcely broader than the head, subcylindrical, the sides rounded and unarmed, the base nearly straight or only slightly sinuated.

Elytra narrow, nearly parallel at the sides, the apex truncate or entire. Legs short, equal; femora thickened in the middle; tarsi as long as their tibiæ, the posterior with the three basal joints subequal. Pro- and meso-sterna simple.

Among the *Cerambycinæ* with an unarmed prothorax this genus will be distinguished by its serrated antennæ, which cuts it off from *Calpazia*, *Dialeges*, and others; and its large faceted eyes will prevent its being confounded with *Lachnopterus*. I have already published a member of this genus under the name of *Cerambyx mica-ceus* (Trans. Ent. Soc. ser. 2. iv. p. 237), at the same time pointing it out as a "form apart" from the true species of *Cerambyx*. In all there is a deep groove on the vertex extending to between the upper portions of the eyes, which it just divides. The three species here described are distinguished by the sculpture of the prothorax and the form of its apex.

IMBRIUS LINEATUS. (Pl. XLI. fig. 12.)

- I. *fusco-brunneus*; *prothorace profunde et irregulariter sulcato, inter sulcos tuberculis sitis, apice producto, bidentato*; *elytris vittis griseo pubescentibus indutis*.

Reddish brown; head with scattered greyish hairs; eyes separated above only by the deep vertical groove; palpi and antennæ ferruginous, the latter with the third, fourth, and fifth joints nodulous in the male, and the third longer than the second; in the female the second is longest; prothorax subcylindrical, slightly rounded at the sides, the anterior and posterior borders of equal breadth, the disk deeply grooved transversely and longitudinally, so as to present four transverse series of tubercles; scutellum broadly triangular; elytra finely punctured, covered with several oblique stripes of greyish pubescence; body beneath and legs pale ferruginous, with a thin greyish pile. Length 8 lines (♂), $6\frac{1}{2}$ lines (♀).

IMBRIUS EPHEBUS.

- I. *ferrugineus*, *elytris omnino griseo pubescentibus*; *prothorace profunde in medio longitudinaliter bisulcato, lateribus transverse sulcatis, apice subproducto, integro*.

Pale rusty brown, the elytra with a delicate uniformly greyish pubescence; head with scattered greyish hairs; eyes nearly approximate above; antennæ with the second joint longest in the female (♂ unknown to me); prothorax subcylindrical, slightly rounded at the sides, the disk with two longitudinal grooves including three or four oblong tubercles; the sides transversely grooved, all the tubercles clothed with a yellowish woolly pubescence; scutellum triangular; elytra finely punctured; body beneath and legs ferruginous, with a scattered greyish pubescence. Length 9 lines.

IMBRIUS STRIGOSUS.

- I. *fuscus, nitidus, pube interrupta grisea tectus*; *prothorace transverse sulcato, apice haud producto*.

Glossy brown, with an irregular or interrupted greyish silky pubescence; head with scattered greyish hairs, more condensed around the eyes, which are nearly approximate above; antennæ with the third joint longer than the fourth, which is equal in length to the fifth; prothorax strongly rounded at the sides, the anterior border narrower than the posterior, the disk grooved transversely, the grooves slightly undulating; scutellum semicircular; elytra impunctate, the hairs forming the pubescence oblique or occasionally transverse, and sufficiently condensed in parts to assume the appearance of stripes; body beneath and legs reddish ferruginous, the antennæ dark, all with a rather close greyish pile. Length 10 lines.

A female specimen of another species, differing slightly from the genus, is in the collection.

CYRIOPALUS.

Antennæ 12-articulatæ, pectinatæ.

Prothorax muticus, corrugatus.

Pedes breviusculi; femora haud incrassata.

Head exserted, narrower than the prothorax. Eyes large, strongly emarginate, the facets small. Antennæ twelve-jointed; the scape short, triquetrous; the second joint abbreviated; the third nearly as long as the scape, furnished like the rest, except the last, with a long subulate spine at the apex; fourth and fifth joints rather longer, the sixth to the eleventh gradually increasing in length; the twelfth simply subulate. Prothorax shortly subovate, corrugated, the sides unarmed. Elytra depressed, subparallel. Legs rather short, nearly equal, except that the anterior pair is the shortest; femora not thickened. Pro- and meso-sterna simple.

The remarkable character of the twelve-jointed antennæ will at once distinguish this genus. Mr. Lamb has only a single specimen; and this is also the case with Mr. Wallace, who took it at Sarawak. Without dissection there is nothing to suggest the sex, but there is a breadth in the outline of both that looks feminine. In the event of a second species being discovered, it is probable that the comparative lengths of the antennal joints may be found to be somewhat different. In both specimens there is a short strong tooth on the lower margins of the intermediate and posterior femora, that seems pinched out so as to leave a corresponding cavity in the site it would have occupied had the femora been entire, and this cavity is filled with a pale dense pubescence.

CYRIOPALUS WALLACEI. (Pl. XLII. fig. 3.)

C. fuscescens, pube grisea subtilissima dense tectus.

Brownish, everywhere covered with a very delicate greyish pubescence; head impunctate, deeply grooved on the vertex; eyes, mandibles, and scape dark brown; prothorax rather longer than broad, narrowest at the apex, transversely and irregularly corrugated; scutellum triangular; elytra much broader at the base than the prothorax, impunctate, their apices emarginate, the angles strongly

mucronate; body beneath brownish luteous, finely pubescent; legs brown; antennæ about as long as the body, brown, with subulate processes luteous and finely fringed on each side in the direction of their axis*. Length 20 lines.

RHYTIDODERA.

Hammaticherus, White, Cat. Long. Brit. Mus. p. 132.

RHYTIDODERA SIMULANS.

Hammaticherus? simulans, White, *op. cit.* p. 132.

It is difficult to say why this species, except for its transverse instead of longitudinal prothoracic striæ, was placed (even though doubtfully) with *Hammaticherus*, seeing that *Rhytidodera*, to which it naturally belongs, is proposed for a nearly cognate species immediately after it, and to which indeed Mr. White compares it. *Hammaticherus*, a name coined by Megerle, in compliance with a most faulty principle, to supersede the old name of *Cerambyx*, was first described and applied by Serville to *Plocæderus* of Dejean, *Cerambyx* being properly retained by the same author for the European species, which are naturally the most familiar, and, in the usual sense, the most typical.

RHYTIDODERA CRISTATA. (Pl. XLIII. fig. 1.)

R. supra pube purpureo-fusca dense vestita; prothorace utrinque longitudinaliter bicarinato, in medio crista pilosa elliptica instructo.

Densely covered above with a dark purplish-brown pubescence; head with a coarse irregular pubescence; prothorax broader than the head, sulcated at the base and apex, the intermediate part with three smooth longitudinal grooves on each side, enclosing two well-marked ridges, between the two series of grooves an elevated elliptical protuberance densely covered with perfectly erect hairs; scutellum subtriangular, truncate at the apex; elytra more than three times the length of the prothorax, broadest behind the middle, the apices emarginate with each angle shortly mucronate; pubescence slightly mixed with greyish hairs, especially at the sides; body beneath and legs reddish chestnut, with a thin greyish pile; antennæ considerably shorter than the body, the third to the eighth joints nodose at the apex, scape more densely pubescent. Length 13 lines.

The *clothes-brush*-like crest on the prothorax is very remarkable and peculiar. The protuberance that forms the basis appears to be deeply constricted all round, and the upper surface to be somewhat convex. The elytra are more or less clouded, according to the light, the dark spots being more particularly visible on each side behind

* A nearly allied genus has been recently described by M. Kaup (Einige Ceramb. der Grossherzog. Sammlung zu Darmstadt) under the name of *Westwoodia*. This name has, however, been twice previously used; I have therefore to propose *Aprodictus* in its stead, under which it has long stood in my cabinet waiting publication in the 'Longicornia Malayana.'

the middle; but these characters probably vary according to the individual.

EBURIINÆ.

CERESIMUM.

Ceresium, Newman, Entom. p. 322.

CERESIMUM RARIPILUM, Newman, *l. c.*

Mr. Newman's type was from Manilla.

CERESIMUM VESTIGIALE.

C. nigrum, subnitidum, pilis sparsis griseis tectum; prothorace longitudine latitudine fere æquali; femoribus valde clavatis.

Black, subnitid, covered with rather long scattered greyish hairs; head and prothorax finely punctured, the latter about equal in length and breadth, contracted anteriorly, a smooth central longitudinal line and two irregular smooth spots on each side; scutellum triangular, covered with white hairs; elytra rather finely punctured, nearly parallel at the sides, the apex rounded; body beneath and legs glossy black, with a thin greyish pubescence; antennæ about as long as the body, the third and fourth joints shorter than the scape and fifth joint. Length 5 lines.

A shorter species than the former and unicolorous, the third joint of the antennæ much shorter than the scape (as long or longer in *C. raripilum*), and the femora much more clavate.

CERESIMUM ZEYLANICUM, White, Cat. Long. Brit. Mus. p. 246.

The type is from Ceylon. Mr. Wallace has also taken it at Sarawak.

CERESIMUM SIMPLEX.

Stenochorus simplex, Gyllenhal in Schön. Syn. Ins. App. i. 3. p. 178.

Emona philippensis, Newman, Entom. p. 247.

Very generally distributed in the Indian and many Pacific islands, but is wanting in Australia. This species has also been published by M. Blanchard under the ill-judged name of *Diatomocephala maculaticollis*. I cannot see that it is generically distinct from *Ceresium*.

CERESIMUM? VERSUTUM.

C. brunneum, albo pilosum; capite brevissimo; prothorace fusco, confertim foveolato; art. tertio antennarum scapo longiore; pedibus rufo-ferrugineis, nitidis.

Reddish brown, covered with long scattered loose whitish or yellowish-white hairs; head dark brown, rugosely punctate; palpi and lip pale ferruginous; prothorax dark brown, with crowded irregular impressions, the intervals intricately corrugated; scutellum rounded behind, brown; elytra considerably broader than the prothorax,

closely punctured, the intervals at the base thrown into transverse granulous folds, each puncture with a whitish hair at the base, apex rounded; body beneath glossy brown, paler on the abdomen; legs reddish ferruginous, shining, clothed with a few long whitish hairs, especially on the tibiæ and tarsi; antennæ ferruginous, much longer than the body, the basal joint paler, shining, punctured, all clothed with loose scattered hairs. Length $5\frac{1}{2}$ lines.

This is one of a number of undescribed species allied to *Ceresium*, which it will be necessary to separate when they are worked up. It differs from the true *Ceresia* in the short broad face, and long third joint of the antennæ. It is also a native of Borneo.

PURPURICENINÆ.

PURPURICENUS.

*Purpuricen*us, Serville, Ann. Soc. Ent. de Fr. ii. p. 568.

PURPURICENUS SANGUINOLENTUS.

Cerambyx sanguinolentus, Olivier, Entom. iv. no. 67. p. 93, pl. 20. f. 155.

This species occurs also in India. The genus, with which Mr. White's *Cyclodera* appears to me to be identical, is found all over the world.

EURYPHAGUS.

Euryphagus, J. Thomson, Syst. Ceramb. p. 700.

Eurycephalus, Laporte de Castelnau, Hist. Nat. des Ins. ii. p. 430 (nec G. Gray).

EURYPHAGUS MAXILLOSUS.

Cerambyx maxillosus, Olivier, Entom. iv. no. 67, pl. 20. f. 147 (♂).

Cerambyx nigripes, id. pl. 20. f. 149 (♀).

The male of this species has an unusually large head, with corresponding mandibles, and is generally paler and more unicolorous than the female. The latter is bright red, with the posterior portion of the elytra black; the prothorax has sometimes a large black spot on the centre of the disk. Mr. Wallace has specimens from Borneo, Sumatra, and Lombok. It is also found in India and the Philippine Islands.

EURYCLEA.

Euryclea, J. Thomson, Syst. Ceramb. p. 196.

EURYCLEA CARDINALIS.

Eurycephalus cardinalis, J. Thomson, Essai, &c., p. 211.

There is no apparent difference in the numerous examples I have seen of this magnificent species from Singapore and Sarawak, where it was originally taken by Mr. Wallace. The male has the large head and mandibles characterizing the preceding species. *Euryclea* has

been separated from *Euryphagus* by M. J. Thomson, principally on account of the greater length of the posterior legs, and their simple, almost linear femora.

CERASPHORINÆ.

STROMATIUM.

Stromatium, Serville, Ann. Soc. Ent. de Fr. iii. p. 80.

STROMATIUM ASPERULUM, White, Cat. Long. Brit. Mus. p. 300.

A common Malay species, found also at Hong Kong. In Mr. Wallace's collection there are specimens from Macassar, Amboyna, Batchian, and Banda.

NOSERIUS.

Noserius, Pascoe, Trans. Ent. Soc. ser. 2. iv. p. 95.

NOSERIUS TIBIALIS, Pascoe, *l. c.* pl. 23. f. 4.

Mr. Lamb's specimen differs from my type in being more rufescent, the prothorax less transverse, and the third joint of the antennæ *only* being dusky. It was one of Mr. Wallace's captures in Borneo.

GNATHOLEA.

Gnatholea, J. Thomson, Essai, &c., p. 375.

GNATHOLEA EBURIFERA, J. Thomson, *l. c.*

The male of this remarkable species has the mandibles prolonged and their upper surface so raised as to enclose the lip behind them. The elytra have two or more raised ivory spots, as in the South American genus *Eburia* and its allies.

XYSTROCERA.

Xystrocera, Serville, Ann. Soc. Ent. de Fr. iii. p. 69.

XYSTROCERA GLOBOSA.

Cerambyx globosus, Olivier, Entom. iv. no. 67. p. 27, pl. 12. f. 81.

A well-known insect, extending from the Isle of France to India and Java.

XYSTROCERA ALCYONEA.

Viridi-vel cyaneo-metallica; *antennis articulis quinque basalibus tuberculato-spinosis.*

Glabrous, shining, metallic green or blue; head with oblong punctures between the eyes, the intervals with fine vertical corrugations, the punctures on the vertex crowded, the intervening lines becoming rather oblique towards the median groove; prothorax slightly broader than long, transversely corrugated, the middle of the disk near the anterior impressed line smooth and impunctate, on each

side below the disk a longitudinal V-shaped scar-like depression; scutellum triangular; elytra covered with small crowded punctures, divided by short transverse lines, or, in other words, transversely corrugated, each elytron indistinctly marked with two raised lines, its apex obliquely truncate; body beneath glossy golden green; legs blue, or violet-blue; antennæ dark blue, the first five joints covered more or less with short tuberculate spines. Length 8 lines.

This seems to be a variable species, so far as size and amount of spinosity on the antennæ are concerned. Generally the coxæ are reddish; but I have a small specimen, with much less rugose antennæ, in which the colour is scarcely to be distinguished from that of the femora. The example described above is from Sarawak, where, as well as in Singapore, the species was taken by Mr. Wallace.

PRIONIDÆ.

REMPHAN.

Remphan, Waterhouse, Trans. Ent. Soc. ser. 1. i. p. 67.

REMPHAN HOPEI, Waterhouse, *l. c.* pl. 8. f. 1.

Remphan appears to differ from *Macrotoma* solely in the greater length of the scape, which is thus rather longer than the third joint—a character directly opposed to the true *Macrotomæ*. The remarks of M. Guérin Méneville on this genus are so apposite, and are so much more applicable at the present time, that we think we are doing some service in calling attention to them here. He says, “The genus *Remphan* of Mr. Waterhouse, it seems to us, ought to be placed near *Macrotoma*. The author has forgotten to state its affinities, after having given its generic *characters*, commencing with the head and finishing with the abdomen, just as is the custom with many entomologists, and which is very convenient for celerity. In fact, in thus freeing one’s self from the researches which *ought* to be *really* made in order to fix the place of a new genus, the task is reduced to almost mechanical work; for it is only to say all or almost all that can be seen of an insect to describe it, and leave to the poor reader the care and perplexity of picking out whatever seems good to him”*. Mr. Waterhouse is, however, one of the last that we can complain of in this respect; but the systematic determination of some to content themselves with the barest descriptions, without giving the slightest clue to the position of their new genera, ought to disentitle them to the right of priority in the event of any of these genera being afterwards described in a conscientious and recognizable manner. Of course, it is a different matter when it is *stated* of any new genus that its affinities are doubtful or unknown to its author. As M. Guérin Méneville observes, these mechanical descriptions can be done by any one; the real test of competency will be found in the observations which every conscientious writer will feel it his duty to make in instituting, or proposing to institute, a new genus.

* Iconographie du règne Animal, Insectes, p. 212.

ÆGOSOMA.

Ægosoma, Serville, Ann. Soc. Ent. de Fr. i. p. 162.

ÆGOSOMA MARGINALE.

Cerambyx marginalis, Fabricius, Entom. Syst. ii. p. 264.

This appears to be a common species in Malacca. It is represented in Europe by *Æ. scabricorne*, and in North China by *Æ. sinicum*, both very nearly allied. Mr. Bowring finds it at Hong Kong, and Mr. Wallace at Macassar, as well as in Bouru and Amboyna.

MEGOPIS.

Megopis, Serville, Ann. Soc. Ent. de Fr. i. p. 161.

MEGOPIS PROCERA.

M. elongata, pallide ferruginea; elytris tricoloratis, costis liberis; genubus concoloribus.

Elongate, pale ferruginous, glabrous, tips of the mandibles black; head and prothorax opaque, covered with numerous small granules; scutellum subscutiform, rounded behind; elytra parallel, closely punctured, each puncture with a small whitish scale at the base, with three costæ, exclusive of the raised suture and the submarginal raised line externally, the inner costa shortest, but not connected with the intermediate, nor the latter with the outer costa, apices mucronate at the suture; body beneath with a short greyish pile; legs finely punctured, glabrous; antennæ glabrous, half as long as the body, the third joint three times as long as the scape. Length 13 lines.

Longer than *M. costipennis*, White, with the costæ on the elytra free throughout, not connected behind the middle, and the metasternum with a short pile like the rest of the under surface. An undescribed species is found at the Cape of Good Hope. The type *M. mutica* is from the Isle of France.

EXPLANATION OF PLATES XLI., XLII., XLIII.

PLATE XLI.

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| Fig. 1. <i>Asilaris zonatus</i> , p. 505. | Fig. 7. <i>Diosyris miranda</i> , p. 508. |
| 2. <i>Sigeum humerale</i> , p. 523. | 8. <i>Bicon sanguineus</i> , p. 522. |
| 3. <i>Sesthya cephalotes</i> , p. 513. | 9. <i>Ephies cruentus</i> , p. 506. |
| 4. <i>Mydasta discoidea</i> , p. 512. | 10. <i>Ciopera decolorata</i> , p. 511. |
| 5. <i>Epianthe viridis</i> , p. 511. | 11. <i>Asmedia mimetes</i> , p. 526. |
| 6. <i>Mimistena femorata</i> , p. 514. | 12. <i>Imbrius lineatus</i> , p. 529. |

PLATE XLII.

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| Fig. 1. <i>Capnolymma capreola</i> , p. 504. | Fig. 5. <i>Pyrestes scapularis</i> , p. 516. |
| 2. <i>Plutonesthes crocata</i> , p. 514. | 6. — <i>politus</i> , p. 516. |
| 3. <i>Cyriopalus wallacei</i> , p. 530. | 7. <i>Euryarthrum nodicolle</i> , p. 524. |
| 4. <i>Pyrestes virgatus</i> , p. 517. | |

PLATE XLIII.

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|---|---|
| Fig. 1. <i>Rhytidodera cristata</i> , p. 531. | Fig. 4. <i>Pachyteria spinicollis</i> , p. 519. |
| 2. <i>Pachyteria virescens</i> , p. 519. | 5. — <i>speciosa</i> , p. 519. |
| 3. — <i>strumosa</i> , p. 520. | 6. — <i>lambii</i> , p. 519. |

15. Notes on Birds collected in Tenasserim and in the Andaman Islands. By ARTHUR, Viscount WALDEN, F.L.S., F.Z.S.

Dr. Selater has placed in my hands for publication the ornithological portion of a zoological collection which Captain Beavan is engaged in making in Tenasserim, and the firstfruits of which he has recently transmitted to this country. With the exception of six species obtained in the Andaman Islands, the specimens sent were collected in the neighbourhood of Moulmein and in the valley of the lower course of the Salween River. The collection is accompanied by some interesting notes of observations made by the collector, most of which, if, indeed, not all, convey new information. These notes I have transcribed in full; and it is to be hoped that during his stay in the Tenasserim provinces Captain Beavan will continue the useful practice of recording such observations as it is only within the power of the field-naturalist to make. An exhaustive catalogue of the Avifauna of the Tenasserim provinces has yet to be compiled. The identity of rarer species with the types from the neighbouring countries has in the majority of cases yet to be determined; and where differences occur, the degree and nature of the variation have in many instances still to be made known. In nearly all the species the exact limits of their areas of distribution remain a desideratum; and it is only by means of local collections, such as the one Captain Beavan is now engaged in making, that any progress in these branches of knowledge can become possible. Mr. Blyth, it is true, has amassed a large number of facts bearing on these subjects; but they are scattered through so many papers and different periodicals, that, until they are brought together and systematically arranged, much time will have to be spent by the student before full benefit can be derived from their undoubted value. In Europe little has been done, chiefly in consequence of the want of authentic specimens from different localities, and sufficiently large series of the specimens sent. As a result of this paucity of local specimens in our museums, or rather in one and the same collection, many species inhabiting the continent of India for instance, remain still bearing titles originally bestowed on forms foreign to that country; and an absolute identity, as far as these species are concerned, is thus assumed to exist between birds, not migratory, inhabiting regions widely apart. And yet, on comparison being made between actual specimens from distant localities, certain differences are frequently, and in many genera invariably, discovered, which, whether of specific value in the opinion of some naturalists or not, still seem to go far in showing that absolute stability and immutability of specific forms in birds does not exist.

The numbers and sexes given at the head of each species in this paper are those attached to the specimens by Captain Beavan. I commence with the Tenasserim specimens.

1. *HARPACTES ORESKIOS*, (Temm.)?*Trogon oreskios*, Temm. Pl. Col. 181.

No. 26. Salween Valley.

"Bill blue, also skin of eyes and feet. Found this beautiful Trogon plentiful on Korkarit Island, Salween River. It lives in thick forest jungle, where there is but little underwood; but the trees above have their boughs matted together, and bound up by tangled creepers, creating a deep shade below, to the great convenience of the observer. These Trogons go about in parties of seven or eight, sometimes more, and are very silent and quiet in their movements. No call-note is heard; but a bird suddenly darts from a low bough, seizes an insect near the ground, and, returning to its perch, leisurely devours it before you, without showing any signs of alarm at the presence of an intruder on its domains. He will then sit there so quietly that, if once lost sight of, it is difficult to find his whereabouts again, so similar is the colour of the plumage to that of the leaves. The female is much like the male, but altogether duller in plumage, especially about the under parts. In the same kind of forest may frequently be seen, on the highest trees, the grand Hornbill (*Buceros homrai*, Hodg.) ; while on the damp ground below, wherever, here and there, a passing shower has left a few small half-dried pools of water, the Blue Ground-Thrush (*Pitta cyanoptera*) marches about in all his glory, flying up to the nearest bough on your too near approach."

I have no Javan specimen wherewith to compare. Mr. Blyth (Ibis, 1865, p. 32) considers the Burmese race conspicuously different. Arakan is the furthest recorded northern limit of this species.

2. *MEROPS VIRIDIS*, Linn. S. N. ed. 12. p. 182. n. 2.

No. 52, ♀. Moulmein.

"Common in neighbourhood of Moulmein." The specimen sent belongs to the race named *ferrugiceps* by Hodgson (Gray, Zool. Misc. 1844, p. 82), and which, Dr. Jerdon observes, forms the prevalent race in Burmah. Mr. Blyth has also remarked that *M. viridis* in Burmah has a redder head than in India (J. A. S. B. 1863, p. 74). The entire head and nape of this specimen is of a bright rusty, with a tinge of green; the throat is green, edged with blue on the cheeks. The upper plumage is darker green than in Candeish and Ceylon specimens; and in them the throat is bright turquoise blue, with green predominating over the rufous of the head and nape. But the validity of the specific distinctions cannot be satisfactorily established from a single specimen, and therefore for the present I prefer retaining the Tenasserim form under *M. viridis*. It seems, however, to be a link of transition between the true *M. viridis* and *M. quinticolor*.

3. *LORICULUS VERNALIS*, (Sparrm.).*Psittacus vernalis*, Sparrman, Mus. Carls. 1787, pl. 24.

Nos. 23, 24, 25, ♀. Salween River.

"Irides white in some, light brown in others, the latter probably